

# Central Region HIV Annual Epidemiological Profile

Data reported through June 30, 2017

Center for HIV Surveillance, Epidemiology and Evaluation Infectious Disease Prevention and Health Services Bureau Prevention and Health Promotion Administration Maryland Department of Health http://phpa.health.maryland.gov/OIDEOR/CHSE 1-800-358-9001

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### Section I – Background Information

### HIV/AIDS Reporting Requirements

The Maryland HIV/AIDS Reporting Act of 2007 went into effect on April 24, 2007. The law expanded HIV/AIDS reporting and required that HIV cases be reported by name. The following highlights the reporting requirements of Health-General Articles 18-201.1, 18-202.1, and 18-205 of the Annotated Code of Maryland, as specified in the Code of Maryland Regulations (COMAR) 10.18.02.

- Physicians are required to report patients in their care with diagnoses of HIV or AIDS immediately to the Local Health Department where the physician's office is located by mailing the Maryland Confidential Morbidity Report (DHMH 1140). Reports are also accepted by phone.
- Physicians are required to report infants born to HIV positive mothers within 48 hours to the Maryland Department
  of Health by mailing the Maryland Confidential Morbidity Report (DHMH 1140). Reports are also accepted by
  phone.
- Clinical and infection control practitioners in hospitals, nursing homes, hospice facilities, medical clinics in correctional facilities, inpatient psychiatric facilities, and inpatient drug rehabilitation facilities are required to report patients in the care of the institution with diagnoses of HIV or AIDS within 48 hours to the Local Health Department where the institution is located by mailing the Maryland Confidential Morbidity Report (DHMH 1140). Reports are also accepted by phone. Facilities with large volumes are encouraged to contact the Maryland Department of Health to establish electronic reporting.
- Laboratory directors are required to report patients with laboratory results indicating HIV infection (e.g., positive confirmatory HIV diagnostic tests, all CD4 immunological tests, all HIV viral load tests, and all HIV genotype and phenotype tests) within 48 hours to the Local Health Department where the laboratory is located, or if out of state to the Maryland Department of Health, by mailing the State of Maryland HIV/CD4 Laboratory Reporting Form (DHMH 4492). Laboratories are encouraged to contact the Maryland Department of Health to establish electronic reporting.

Reporting forms and instructions, including mailing addresses and phones numbers, are available on our website: https://phpa.health.maryland.gov/OIDEOR/CHSE/Pages/reporting-material.aspx

### For Assistance with HIV/AIDS Reporting

For assistance with reporting, including establishment of routine, electronic, or other alternate methods of reporting to the Maryland Department of Health, please contact the Center for HIV Surveillance, Epidemiology and Evaluation in the Maryland Department of Health at 410-767-5227.

#### Limitations in the HIV/AIDS Data

This epidemiological profile only contains data for HIV and AIDS cases that have been diagnosed by a health care provider, were reported to the health department by name, and were residents of Maryland at the time of diagnosis or are current residents of Maryland as of 12/31/2016. Nationally, it has been estimated that 15.0% of people living with HIV infection are undiagnosed. In Maryland, it has been estimated that 15.3% of people living with HIV infection are undiagnosed. In addition, despite a massive effort during which over 17,000 HIV cases were reported after the Maryland HIV reporting law changed on April 24, 2007, not all diagnosed HIV cases previously reported by Maryland's code-based identifier were located and re-reported by name. Many of the re-reported HIV cases were identified by a recent diagnosis and not by their earliest diagnosis, resulting in an under-reporting of HIV diagnoses before 2001 and an over-reporting of HIV diagnoses from 2001 to 2008. Surveillance is the ongoing systematic collection, analysis, interpretation, and dissemination of case report data. Case report data are only available for cases receiving medical care, often only at facilities in Maryland, and only includes information that has been reported to the health department. Linkage to care data is based solely on laboratory data reported to the health department.

This epidemiological profile provides estimates of living Maryland diagnosed cases by current residence as of 12/31/2016. Residence at diagnosis is used exclusively to describe new HIV and AIDS diagnoses. Current residence data are restricted to cases for which there is a case report form or laboratory test reported between 1/1/2009 and 6/30/2017. Restricting address data to recent years presents the most accurate data available and helps to account for cases that may have moved out of state whose data would no longer be reported in Maryland. However, current residence data excludes cases that may still be residents of Maryland but have not received any HIV care during the most recent eight and a half years. In addition, residence is dynamic and cases may have resided at multiple addresses that cannot all be represented in single time point estimates.

For additional information regarding current residence, please contact the Center for HIV Surveillance, Epidemiology and Evaluation in the Maryland Department of Health at 410-767-5227.

### Stages of a Case of HIV/AIDS

Untreated HIV disease progresses from HIV infection to AIDS to death. These are biological events that occur whether or not a person receives any medical care. For example, a person can be HIV infected but never have an HIV test and so they do not have an HIV diagnosis. A medical provider diagnoses that these biological events have occurred and records them as a medical event. The law requires medical providers to report these medical events to the Health Department, thereby creating a surveillance event.

Time Point	Biological Event	Medical Event	Surveillance Event
1	HIV Infection		
2		HIV Diagnosis	
3			HIV Report
4	AIDS Conditions		
5		AIDS Diagnosis	
6			AIDS Report
7	Death		
8		Death Diagnosis	
9			Death Report

A case of HIV/AIDS can only move through time in one direction, from HIV infection to death report [from time point 1 to time point 9], but may skip over individual stages. Events can occur simultaneously, but usually there is a time lag between them. The time lag between events can be measured in days, months, and years.

For example, the time between HIV infection [time point 1] and the test that diagnoses HIV [time point 2] may be several years, and it may then take several days for the laboratory and physician to report the diagnosis to the health department [time point 3]. In a second example, a person with diagnosed and reported HIV infection [time point 3] may die [time point 7] without developing AIDS, thereby skipping the three AIDS events (conditions, diagnosis, and report [time points 4, 5 and 6]). And in a third example, a person with undiagnosed HIV infection [time point 1] may become sick, enter the hospital, and die [time point 7] of what is later determined to be AIDS. In that situation, HIV diagnosis [time point 2], AIDS diagnosis [time point 5], and death diagnosis [time point 8] would all occur at the same time, and that would probably be many years after the initial HIV infection [time point 1].

### Changes in Case Terminology

The terminology for HIV and AIDS cases was changed from earlier epidemiological profiles to be more precise, with Reported Diagnoses replacing Incidence and Living Cases replacing Prevalence. Incidence is a measure of the number of new events (such as HIV infections) in a population during a period of time. Prevalence is a measure of the number of people living with a condition (such as HIV) in a population at a certain time. Prevalence includes both newly and previously diagnosed cases as well as undiagnosed infections. For HIV, Incidence and Prevalence cannot be directly measured and must be estimated using statistical methods. The HIV surveillance system is able to provide the actual number of diagnoses and deaths that are reported in the population.

For this epidemiological profile, the reports received through a certain time (six months after December 31<sup>st</sup> of the specified year) are used to generate the number of diagnoses during the prior years. This lag time allows for delays in reporting and time to complete investigations. Instead of the previous one-year lag, this epidemiological profile utilizes a six-month lag, and as a result, data on exposure category and deaths for the prior year are preliminary. For example, the Reported HIV Diagnoses for 2016 are the total of the reported HIV cases with or without an AIDS diagnosis, diagnosed with HIV during 1/1/2016-12/31/2016, as reported by name through 6/30/2017.

To calculate the number of Living Cases we count up all of the Reported Diagnoses from the beginning of the epidemic (all the new cases each year) and subtract all of the Reported Deaths. For example, the Total Living HIV Cases on 6/30/2017 are the total of the reported HIV Cases with or without an AIDS diagnosis and not reported to have died as of 12/31/2016 as reported by name through 6/30/2017.

#### **Laboratory Data**

CD4+ T-lymphocyte tests are measures of a person's immune system function. An HIV infected adult is considered to have AIDS if they have less than 200 CD4+ cells per microliter of blood or if the percent of T-Lymphocyte cells that are CD4+ cells is less than 14%. Viral load (VL) tests are measures of the amount of HIV in a person's body. The goal of HIV treatment is to have a very low number of copies of virus per milliliter of blood, below what the test can measure, which is called an undetectable level. Low levels of VL, such as less than 200 copies per milliliter of blood, are known as viral suppression. Treatment recommendations are that a person in HIV medical care should have their CD4 and VL levels measured regularly, at least once per year. We use the presence of these lab tests as an indicator that someone has been "linked to care" after diagnosis or is "retained in care."

#### Sources of Data

Information on HIV and AIDS diagnoses, including residence at diagnosis, age, race/ethnicity, sex at birth, current gender, country of birth, vital status, HIV exposure category, and CD4 and HIV viral load test results are from the Maryland Department of Health's Enhanced HIV/AIDS Reporting System (eHARS), June 30, 2017.

Population data by sex, age, and race/ethnicity are from the July 1, 2016 U.S. Census Estimates. Population data by country-of-birth are from the Census Bureau's 2015 American Community Survey. This produces a difference in total population due to the different source. Due to estimation limitations, some population totals may not equal the sum of its components. When needed, age groups were divided by assuming uniform age distribution within the age group. Non-Hispanic multiple race and Non-Hispanic some other race from the Census were combined into one group.

Estimations of those undiagnosed are from Centers for Disease Control and Prevention's 2015 HIV Surveillance Supplemental Report published July 2017. The continuum of care is adapted from a 2011 article in Clinical Infectious Diseases in which a continuum of care "cascade" is used to illustrate estimates of the number of persons living with HIV who belong to each of the stages of engagement in HIV care.

#### **Tabulation of Column Totals**

Numbers in figures, tables and generally in the text have been rounded. Discrepancies in tables between totals and sums of components are due to rounding.

#### **Data Suppression**

In order to protect the confidentiality of reported HIV cases, data are suppressed in the following instances:

- Data describing a demographic group or geographic area (e.g. ZIP code) with a population less than 1,000 people.
- All clinical/laboratory information if it is describing less than 5 cases.
- All exposure/risk information if it is describing less than 5 cases, except in the case of "other" exposure.
- If any cell is suppressed, additional cells are also suppressed as necessary to prevent back calculation of the suppressed cell(s).

#### **HIV Exposure Categories**

The Centers for Disease Control and Prevention (CDC) developed a hierarchy of exposure categories for surveillance purposes. Persons with more than one reported risk factor are classified in the exposure category listed first in the

hierarchy and therefore counted only once. Men who have sex with men and report injection drug use constitutes a separate transmission category.

MSM/IDU: Men who report a history of sexual contact with other men who also have engaged in injection drug use.

**Men who have Sex with Men (MSM):** Men who report a history of sexual contact with other men (homosexual contact) including men who report sexual contact with both men and women (bisexual contact).

**Injection Drug Use (IDU):** Men or women who report receiving an injection, either self-administered or given by another person, of a drug that was not prescribed by a physician.

**Heterosexual Exposure (HET)**: Men or women who report a history of sexual contact with a person of the opposite sex who is known to have an HIV infection or at high risk for an HIV infection. High risk groups include bisexual men, IDUs and recipients of blood, blood components, transplants of organ or tissue and artificial insemination.

**Perinatal Exposure:** Any baby born to an HIV positive mother.

Other Exposure: Includes men or women who received clotting factor for hemophilia/coagulation disorder, or received a transfusion of blood/blood components, or received a transplant of tissue/organs or artificial insemination, or worked in a health care or clinical laboratory setting.

Not all exposure data is reported and is therefore missing for some cases. Multiple imputation is a statistical method by which missing exposure categories are replaced with estimated or probable exposure categories. Multiple imputation involves filling in the missing exposure category with multiple possible exposures, creating several complete datasets. Filling in the missing exposure category is done using the observed data for the individual case as well as data in aggregate from other cases in Maryland. The complete datasets, containing the various predictions for each missing exposure category, are combined to create a final dataset with previously missing exposure category replaced by weighted estimates.

#### **MDH Non-Discrimination Statement**

The Maryland Department of Health (MDH) complies with applicable Federal civil right laws and does not discriminate on the basis of race, color, national origin, age, disability in its health programs and activities.

#### **English**

Help is available in your language: 410-767-5227 (TTY: 1-800-735-2258). These services are available for free.

#### Español/Spanish

Hay ayuda disponible en su idioma: 410-767-5227 (TTY: 1-800-735-2258). Estos servicios están disponibles gratis.

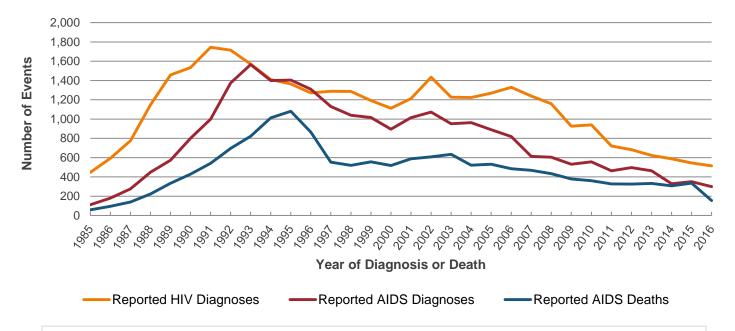
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### Section II - Trends 1985-2016

# Figure 1 – Trends in Reported HIV and AIDS Diagnoses and Deaths, 1985-2016, Reported through 6/30/2017

Reported HIV Cases with or without an AIDS Diagnosis (Reported HIV Diagnoses) by Year of HIV Diagnosis, Reported HIV Cases with an AIDS Diagnosis (Reported AIDS Diagnoses) by Year of AIDS Diagnosis, and Reported HIV Cases with an AIDS Diagnosis Reported to have Died of Any Cause (Reported AIDS Deaths) by Year of Death, from 1985 through 2016 as Reported through 6/30/2017



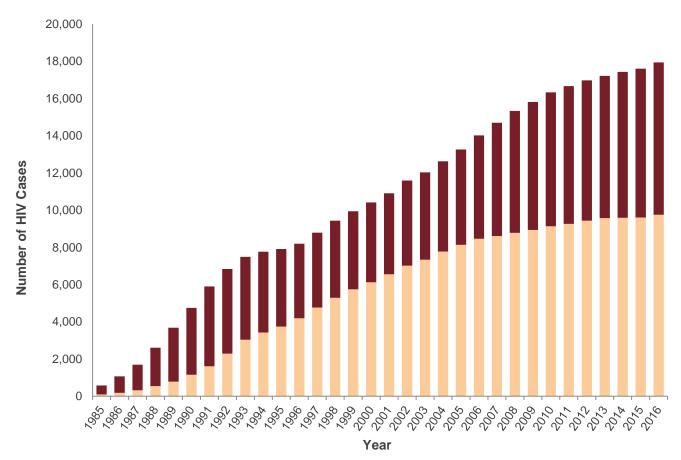
During the 2007-2008 transition to name-based reporting, many HIV cases were reported by a recent HIV diagnosis and not by their earliest HIV diagnosis, resulting in an artificial upward trend in HIV diagnoses during the period 2001-2008.

YEAR OF DIAGNOSIS OR DEATH	REPORTED HIV DIAGNOSES	REPORTED AIDS DIAGNOSES	REPORTED AIDS DEATHS	YEAR OF DIAGNOSIS OR DEATH	REPORTED HIV DIAGNOSES	REPORTED AIDS DIAGNOSES	REPORTED AIDS DEATHS
<1985	227	78	36	2001	1,212	1,014	588
1985	446	112	59	2002	1,434	1,072	608
1986	592	180	94	2003	1,226	951	634
1987	776	275	140	2004	1,223	963	522
1988	1,147	449	223	2005	1,269	890	531
1989	1,457	573	334	2006	1,329	818	485
1990	1,534	800	428	2007	1,238	612	469
1991	1,744	999	541	2008	1,158	605	433
1992	1,714	1,374	696	2009	927	532	379
1993	1,570	1,566	821	2010	939	557	361
1994	1,410	1,400	1,013	2011	720	464	327
1995	1,364	1,404	1,081	2012	683	497	326
1996	1,271	1,310	865	2013	622	463	332
1997	1,288	1,131	553	2014	587	328	307
1998	1,286	1,040	519	2015*	544	351	335
1999	1,192	1,016	556	2016*	514	299	155
2000	1,113	894	518	TOTAL	35,756	25,017	15,269

<sup>\*2015-2016</sup> reported AIDS deaths are preliminary.

### Figure 2 – Trends in Living HIV Cases, 1985-2016, Reported through 6/30/2017

Reported HIV Cases with or without an AIDS Diagnosis and Not Reported to have Died as of December 31st of Each Year (Living HIV Cases without AIDS, Living HIV Cases with AIDS, and Total Living HIV Cases) from 1985 through 2016, as Reported through 6/30/2017



Living HIV Cases with AIDS

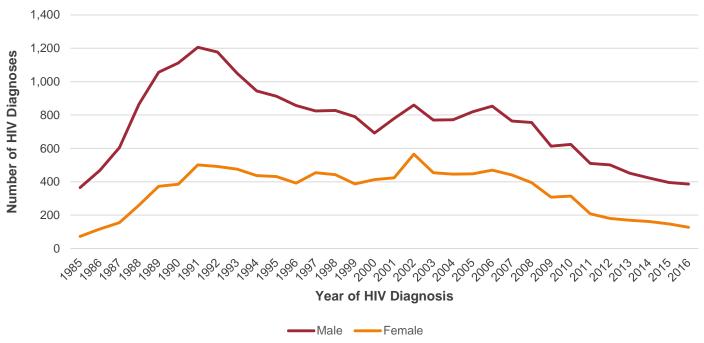
■ Living HIV Cases without AIDS

YEAR	LIVING HIV CASES WITHOUT AIDS	LIVING HIV CASES WITH AIDS	TOTAL LIVING HIV CASES	YEAR	LIVING HIV CASES WITHOUT AIDS	LIVING HIV CASES WITH AIDS	TOTAL LIVING HIV CASES
1985	481	95	576	2001	4,353	6,552	10,905
1986	885	181	1,066	2002	4,580	7,016	11,596
1987	1,379	317	1,696	2003	4,696	7,333	12,029
1988	2,064	543	2,607	2004	4,848	7,774	12,622
1989	2,900	782	3,682	2005	5,130	8,133	13,263
1990	3,599	1,154	4,753	2006	5,548	8,466	14,014
1991	4,287	1,612	5,899	2007	6,087	8,609	14,696
1992	4,547	2,290	6,837	2008	6,556	8,781	15,337
1993	4,460	3,035	7,495	2009	6,885	8,934	15,819
1994	4,340	3,423	7,763	2010	7,197	9,130	16,327
1995	4,165	3,746	7,911	2011	7,402	9,267	16,669
1996	4,002	4,191	8,193	2012	7,534	9,438	16,972
1997	4,022	4,769	8,791	2013	7,644	9,569	17,213
1998	4,144	5,290	9,434	2014	7,838	9,590	17,428
1999	4,195	5,750	9,945	2015	7,996	9,606	17,602
2000	4,292	6,126	10,418	2016	8,188	9,750	17,938

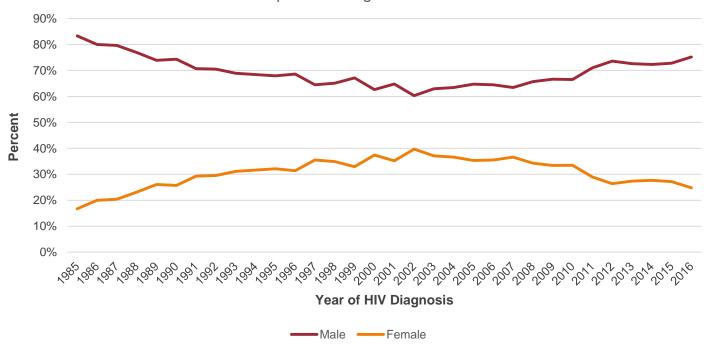
# Figure 3 – Trends in Adult/Adolescent Reported HIV Diagnoses by Sex at Birth, 1985-2016, Reported through 6/30/2017

Number and Percent by Sex at Birth of Adult/Adolescent Reported HIV Cases, Age 13+ at HIV Diagnosis, with or without an AIDS Diagnosis (Adult/Adolescent Reported HIV Diagnoses) by Year of HIV Diagnosis from 1985 through 2016, as Reported through 6/30/2017





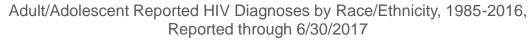
### Adult/Adolescent Reported HIV Diagnoses by Sex at Birth, 1985-2016, Reported through 6/30/2017

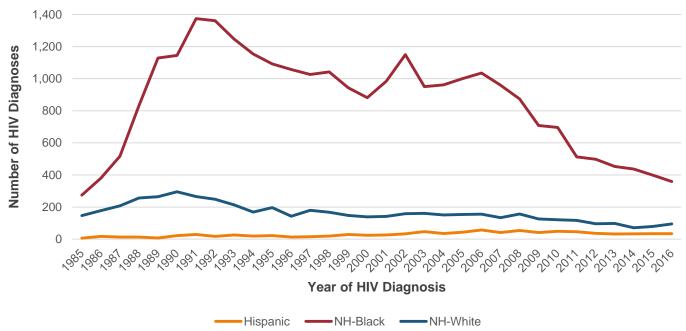


		ADULT/ADOLESCE	NT REPORTED HIV DIA	AGNOSES		
YEAR OF HIV DIAGNOSIS			SEX AT BIR	тн		
I EAR OF THE DIAGNOSIS	No.	Male		Female		
		No.	%	No.	%	
<1985	225	194	86.2%	31	13.8%	
1985	438	365	83.3%	73	16.7%	
1986	585	468	80.0%	117	20.0%	
1987	760	605	79.6%	155	20.49	
1988	1,125	865	76.9%	260	23.19	
1989	1,429	1,056	73.9%	373	26.19	
1990	1,497	1,112	74.3%	385	25.79	
1991	1,707	1,206	70.7%	501	29.39	
1992	1,669	1,177	70.5%	492	29.59	
1993	1,525	1,050	68.9%	475	31.19	
1994	1,381	944	68.4%	437	31.69	
1995	1,344	913	67.9%	431	32.19	
1996	1,249	857	68.6%	392	31.49	
1997	1,278	824	64.5%	454	35.59	
1998	1,270	827	65.1%	443	34.99	
1999	1,177	790	67.1%	387	32.99	
2000	1,105	692	62.6%	413	37.4	
2001	1,203	779	64.8%	424	35.2	
2002	1,426	860	60.3%	566	39.7	
2003	1,224	770	62.9%	454	37.1	
2004	1,218	772	63.4%	446	36.6	
2005	1,268	820	64.7%	448	35.39	
2006	1,323	853	64.5%	470	35.59	
2007	1,205	764	63.4%	441	36.69	
2008	1,150	755	65.7%	395	34.39	
2009	921	613	66.6%	308	33.4	
2010	938	624	66.5%	314	33.5	
2011	718	510	71.0%	208	29.0	
2012	681	501	73.6%	180	26.4	
2013	621	451	72.6%	170	27.4	
2014	585	423	72.3%	162	27.7	
2015	544	396	72.8%	148	27.2	
2016	513	386	75.2%	127	24.89	
TOTAL	35,302	24,222	68.6%	11,080	31.49	

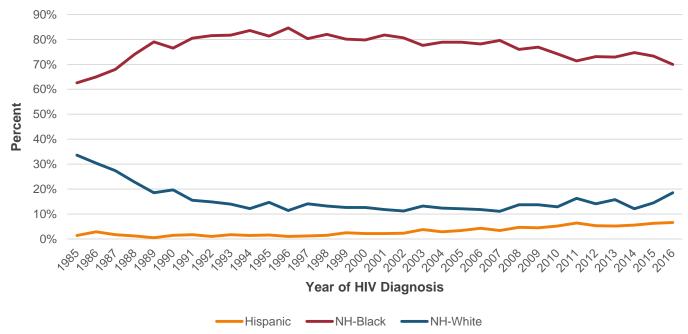
# Figure 4 – Trends in Adult/Adolescent Reported HIV Diagnoses by Race/Ethnicity, 1985-2016, Reported through 6/30/2017

Number and Percent by Race/Ethnicity of Adult/Adolescent Reported HIV Cases, Age 13+ at HIV Diagnosis, with or without an AIDS Diagnosis (Adult/Adolescent Reported HIV Diagnoses) by Year of HIV Diagnosis from 1985 through 2016, as Reported through 6/30/2017





### Adult/Adolescent Reported HIV Diagnoses by Race/Ethnicity, 1985-2016, Reported through 6/30/2017

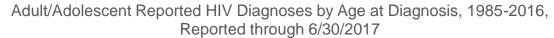


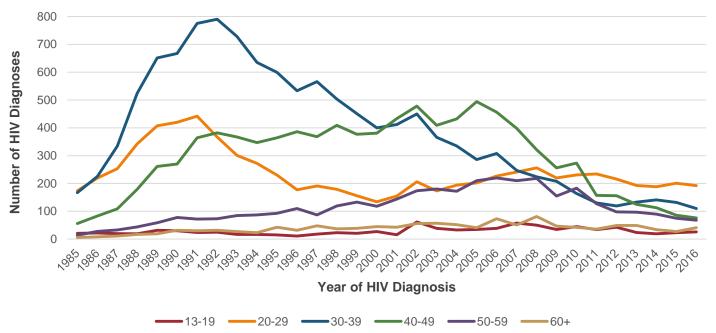
Non-Hispanic Other race not shown

			Αc	OULT/ADOLESCEN	T REPORTED	HIV DIAGNOSES			
YEAR OF					RACE/ET	HNICITY			
HIV Diagnosis	No.	Hispar	nic	Non-Hispan only	•	Non-Hispani only		Non-Hispan Race	
		No.	%	No.	%	No.	%	No.	%
<1985	225	7	3.1%	121	53.8%	91	40.4%	6	2.7%
1985	438	6	1.4%	274	62.6%	147	33.6%	11	2.5%
1986	585	17	2.9%	380	65.0%	178	30.4%	10	1.7%
1987	760	13	1.7%	517	68.0%	208	27.4%	22	2.9%
1988	1,125	13	1.2%	832	74.0%	256	22.8%	24	2.1%
1989	1,429	7	0.5%	1,129	79.0%	264	18.5%	29	2.0%
1990	1,497	22	1.5%	1,145	76.5%	295	19.7%	35	2.3%
1991	1,707	29	1.7%	1,374	80.5%	265	15.5%	39	2.3%
1992	1,669	17	1.0%	1,361	81.5%	248	14.9%	43	2.6%
1993	1,525	26	1.7%	1,246	81.7%	214	14.0%	39	2.6%
1994	1,381	19	1.4%	1,154	83.6%	169	12.2%	39	2.8%
1995	1,344	22	1.6%	1,092	81.3%	197	14.7%	33	2.5%
1996	1,249	13	1.0%	1,057	84.6%	143	11.4%	36	2.9%
1997	1,278	15	1.2%	1,026	80.3%	180	14.1%	57	4.5%
1998	1,270	19	1.5%	1,042	82.0%	168	13.2%	41	3.2%
1999	1,177	29	2.5%	943	80.1%	148	12.6%	57	4.8%
2000	1,105	24	2.2%	882	79.8%	139	12.6%	60	5.4%
2001	1,203	26	2.2%	984	81.8%	142	11.8%	51	4.2%
2002	1,426	33	2.3%	1,150	80.6%	159	11.2%	84	5.9%
2003	1,224	47	3.8%	950	77.6%	161	13.2%	66	5.4%
2004	1,218	35	2.9%	961	78.9%	151	12.4%	71	5.8%
2005	1,268	43	3.4%	1,000	78.9%	154	12.1%	71	5.6%
2006	1,323	57	4.3%	1,035	78.2%	156	11.8%	75	5.7%
2007	1,205	41	3.4%	959	79.6%	134	11.1%	71	5.9%
2008	1,150	54	4.7%	874	76.0%	157	13.7%	65	5.7%
2009	921	41	4.5%	708	76.9%	126	13.7%	46	5.0%
2010	938	49	5.2%	696	74.2%	121	12.9%	72	7.7%
2011	718	46	6.4%	513	71.4%	117	16.3%	42	5.8%
2012	681	36	5.3%	498	73.1%	96	14.1%	51	7.5%
2013	621	32	5.2%	453	72.9%	98	15.8%	38	6.1%
2014	585	33	5.6%	437	74.7%	71	12.1%	44	7.5%
2015	544	34	6.3%	399	73.3%	79	14.5%	32	5.9%
2016	513	34	6.6%	359	70.0%	95	18.5%	25	4.9%
Total	35,302	939	2.7%	27.551	78.0%	5,327	15.1%	1.485	4.2%

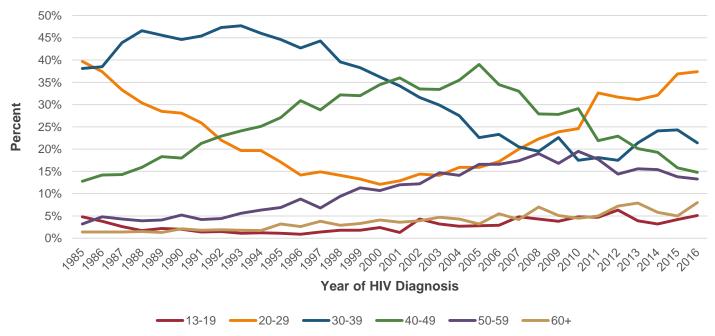
# Figure 5 – Trends in Adult/Adolescent Reported HIV Diagnoses by Age at Diagnosis, 1985-2016, Reported through 6/30/2017

Number and Percent by Age at HIV Diagnosis of Adult/Adolescent Reported HIV Cases, Age 13+ at HIV Diagnosis, with or without an AIDS Diagnosis (Adult/Adolescent Reported HIV Diagnoses) by Year of HIV Diagnosis from 1985 through 2016, as Reported through 6/30/2017





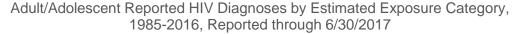
## Adult/Adolescent Reported HIV Diagnoses by Age at Diagnosis, 1985-2016, Reported through 6/30/2017

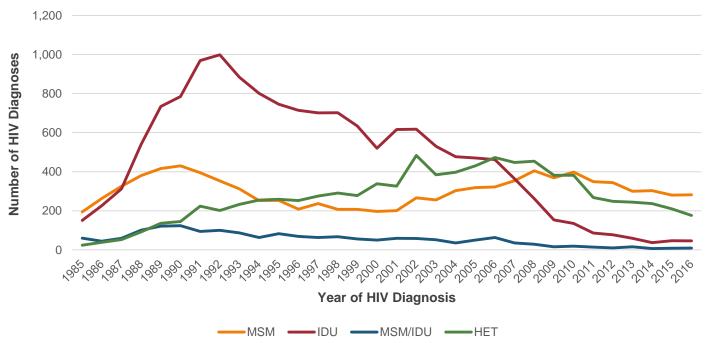


					ADULT/A	DOLESCEN	T REPORTI	ED <b>HIV D</b> I	AGNOSES				
YEAR OF HIV		AGE AT HIV DIAGNOSIS											
DIAGNOSIS	No.	Age 1	3-19	Age	20-29	Age 3	30-39	Age	Age 40-49		Age 50-59		60+
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<1985	225	14	6.2%	98	43.6%	69	30.7%	30	13.3%	13	5.8%	1	0.4%
1985	438	21	4.8%	174	39.7%	167	38.1%	56	12.8%	14	3.2%	6	1.4%
1986	585	22	3.8%	219	37.4%	225	38.5%	83	14.2%	28	4.8%	8	1.4%
1987	760	20	2.6%	253	33.3%	334	43.9%	109	14.3%	33	4.3%	11	1.4%
1988	1,125	19	1.7%	342	30.4%	524	46.6%	179	15.9%	44	3.9%	17	1.5%
1989	1,429	32	2.2%	407	28.5%	651	45.6%	261	18.3%	59	4.1%	19	1.3%
1990	1,497	30	2.0%	420	28.1%	667	44.6%	270	18.0%	78	5.2%	32	2.1%
1991	1,707	24	1.4%	442	25.9%	775	45.4%	364	21.3%	72	4.2%	30	1.8%
1992	1,669	25	1.5%	367	22.0%	790	47.3%	382	22.9%	73	4.4%	32	1.9%
1993	1,525	17	1.1%	301	19.7%	728	47.7%	367	24.1%	85	5.6%	27	1.8%
1994	1,381	17	1.2%	272	19.7%	635	46.0%	347	25.1%	87	6.3%	23	1.7%
1995	1,344	15	1.1%	230	17.1%	599	44.6%	364	27.1%	93	6.9%	43	3.2%
1996	1,249	11	0.9%	177	14.2%	533	42.7%	386	30.9%	110	8.8%	32	2.6%
1997	1,278	18	1.4%	191	14.9%	566	44.3%	368	28.8%	87	6.8%	48	3.8%
1998	1,270	23	1.8%	179	14.1%	503	39.6%	409	32.2%	119	9.4%	37	2.9%
1999	1,177	21	1.8%	156	13.3%	451	38.3%	377	32.0%	133	11.3%	39	3.3%
2000	1,105	27	2.4%	134	12.1%	400	36.2%	381	34.5%	118	10.7%	45	4.1%
2001	1,203	16	1.3%	155	12.9%	412	34.2%	433	36.0%	144	12.0%	43	3.6%
2002	1,426	62	4.3%	206	14.4%	450	31.6%	478	33.5%	174	12.2%	56	3.9%
2003	1,224	39	3.2%	173	14.1%	366	29.9%	409	33.4%	180	14.7%	57	4.7%
2004	1,218	33	2.7%	194	15.9%	335	27.5%	432	35.5%	172	14.1%	52	4.3%
2005	1,268	35	2.8%	202	15.9%	286	22.6%	494	39.0%	210	16.6%	41	3.2%
2006	1,323	39	2.9%	227	17.2%	308	23.3%	456	34.5%	220	16.6%	73	5.5%
2007	1,205	58	4.8%	241	20.0%	247	20.5%	398	33.0%	210	17.4%	51	4.2%
2008	1,150	50	4.3%	256	22.3%	224	19.5%	321	27.9%	218	19.0%	81	7.0%
2009	921	35	3.8%	220	23.9%	208	22.6%	256	27.8%	155	16.8%	47	5.1%
2010	938	45	4.8%	231	24.6%	164	17.5%	273	29.1%	183	19.5%	42	4.5%
2011	718	34	4.7%	234	32.6%	130	18.1%	157	21.9%	127	17.7%	36	5.0%
2012	681	43	6.3%	216	31.7%	119	17.5%	156	22.9%	98	14.4%	49	7.2%
2013	621	24	3.9%	193	31.1%	133	21.4%	125	20.1%	97	15.6%	49	7.9%
2014	585	19	3.2%	188	32.1%	141	24.1%	113	19.3%	90	15.4%	34	5.8%
2015	544	23	4.2%	201	36.9%	132	24.3%	86	15.8%	75	13.8%	27	5.0%
2016	513	26	5.1%	192	37.4%	110	21.4%	76	14.8%	68	13.3%	41	8.0%
TOTAL	35,302	937	2.7%	7,691	21.8%	12,382	35.1%	9,396	26.6%	3,667	10.4%	1,229	3.5%

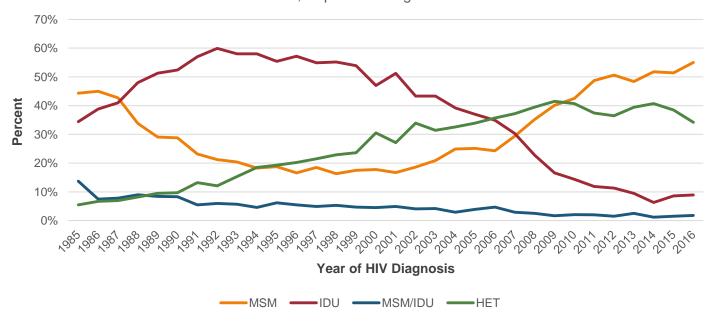
# Figure 6 – Trends in Adult/Adolescent Reported HIV Diagnoses by Estimated Exposure Category, 1985-2016, Reported through 6/30/2017

Number and Percent by Estimated Exposure Category§ of Adult/Adolescent Reported HIV Cases, Age 13+ at HIV Diagnosis, with or without an AIDS Diagnosis (Adult/Adolescent Reported HIV Diagnoses) by Year of HIV Diagnosis from 1985 through 2016, as Reported through 6/30/2017





Adult/Adolescent Reported HIV Diagnoses by Estimated Exposure Category, 1985-2016, Reported through 6/30/2017



Other Exposure Category not shown

§ Multiple imputation was used to estimate and adjust for missing transmission category.

V					ADULT/AD	OLESCENT	REPORTE	HIV DIAG	NOSES			
YEAR OF		% with No				ESTIMA	ATED EXPO	SURE CATE	GORY§			
HIV	No.**	Reported	M	SM	ID	U	MSN	1/IDU	Н	ET	Other E	xposure
DIAGNOSIS		Exposure <sup>¥</sup>	No.	%	No.	%	No.	%	No.	%	No.	%
<1985	225	2.2%	128	56.8%	62	27.4%	19	8.2%	8	3.6%	9	4.0%
1985	438	4.6%	194	44.3%	151	34.4%	60	13.7%	24	5.5%	9	2.1%
1986	585	3.2%	263	45.0%	226	38.8%	44	7.5%	39	6.7%	12	2.1%
1987	760	3.0%	325	42.7%	312	41.0%	59	7.8%	53	7.0%	11	1.4%
1988	1,125	3.1%	380	33.8%	540	48.0%	101	9.0%	92	8.2%	12	1.1%
1989	1,429	2.6%	416	29.1%	734	51.3%	121	8.4%	136	9.5%	23	1.6%
1990	1,497	3.9%	430	28.8%	785	52.4%	124	8.3%	145	9.7%	13	0.9%
1991	1,707	4.1%	395	23.2%	969	57.0%	94	5.5%	224	13.2%	20	1.2%
1992	1,669	4.9%	353	21.2%	998	59.9%	100	6.0%	202	12.1%	12	0.7%
1993	1,525	3.0%	312	20.4%	884	58.0%	87	5.7%	233	15.3%	9	0.6%
1994	1,381	4.2%	252	18.3%	801	58.0%	63	4.6%	255	18.5%	9	0.7%
1995	1,344	4.2%	253	18.8%	745	55.4%	83	6.2%	259	19.3%	4	0.3%
1996	1,249	4.2%	208	16.6%	714	57.2%	69	5.5%	252	20.2%	5	0.4%
1997	1,278	6.3%	237	18.5%	701	54.9%	63	4.9%	275	21.5%	2	0.2%
1998	1,270	5.6%	207	16.3%	702	55.2%	67	5.3%	291	22.9%	4	0.3%
1999	1,177	7.2%	207	17.5%	634	53.9%	56	4.7%	278	23.6%	2	0.2%
2000	1,105	7.2%	197	17.8%	520	47.0%	50	4.5%	338	30.5%	1	0.1%
2001	1,203	8.0%	201	16.7%	616	51.2%	59	4.9%	326	27.1%	1	0.1%
2002	1,426	10.4%	266	18.6%	618	43.3%	58	4.1%	483	33.9%	1	0.1%
2003	1,224	9.6%	256	20.9%	530	43.3%	52	4.2%	384	31.4%	3	0.2%
2004	1,218	10.1%	303	24.9%	477	39.2%	35	2.9%	397	32.6%	6	0.5%
2005	1,268	14.8%	319	25.1%	470	37.0%	50	3.9%	430	33.9%	0	0.0%
2006	1,323	19.1%	322	24.3%	462	34.9%	63	4.7%	473	35.7%	4	0.3%
2007	1,205	20.4%	354	29.4%	364	30.3%	35	2.9%	447	37.2%	3	0.2%
2008	1,150	27.9%	405	35.2%	262	22.8%	29	2.5%	454	39.5%	0	0.0%
2009	921	29.2%	369	40.1%	153	16.6%	16	1.7%	382	41.5%	1	0.1%
2010	938	33.8%	398	42.5%	135	14.4%	19	2.1%	382	40.7%	4	0.4%
2011	718	30.5%	349	48.7%	86	11.9%	14	2.0%	268	37.4%	0	0.0%
2012	681	20.9%	344	50.6%	77	11.3%	10	1.5%	248	36.5%	1	0.1%
2013	621	12.2%	300	48.4%	59	9.5%	16	2.5%	244	39.4%	1	0.2%
2014	585	11.6%	303	51.8%	37	6.3%	7	1.2%	237	40.7%	0	0.0%
2015	544	10.3%	280	51.4%	47	8.6%	8	1.5%	210	38.5%	0	0.0%
2016	513	30.2%	282	55.0%	46	8.9%	9	1.8%	176	34.2%	0	0.0%
TOTAL	35,302	10.4%	9,806	27.8%	14,913	42.3%	1,739	4.9%	8,645	24.5%	182	0.5%

<sup>§</sup> Multiple imputation was used to estimate and adjust for missing transmission category.

<sup>\*</sup>Percent with no reported exposure prior to multiple imputation adjustment.

<sup>\*\*</sup> Discrepancies in the table between total HIV diagnoses and the sums by exposure category are due to less than 1% of cases missing transmission category after multiple imputation.

### Section III – Adult/Adolescent Cases by Jurisdiction

Table 1 – Adult/Adolescent HIV Diagnoses during 2016, Linked to Care, Late Diagnosis, and First CD4 Test Result by Jurisdiction of Residence at HIV Diagnosis, Reported through 6/30/2017

	Adult/Adolescent Reported HIV Diagnoses											
JURISDICTION OF RESIDENCE AT	POPULATION AGE 13+	Na	% of	Dete	Linked to Care		Late HIV Diagnoses	First CD4 Test Result				
HIV DIAGNOSIS	HIV DIAGNOSIS	No.	Total	Rate	% 1 mo.	% 3 mo.	%	%	Median Count			
Anne Arundel	476,307	43	8.4%	9.0	79.1%	86.0%	39.5%	88.4%	259			
Baltimore City	518,161	278	54.2%	53.7	83.1%	88.5%	22.7%	86.0%	415			
Baltimore	701,795	139	27.1%	19.8	83.5%	89.9%	24.5%	84.9%	368			
Carroll	142,910	2	0.4%	1.4	***	***	***	***	***			
Harford	211,682	23	4.5%	10.9	***	***	***	***	***			
Howard	262,960	28	5.5%	10.6	82.1%	82.1%	25.0%	82.1%	226			
TOTAL	2,313,816	513	100.0%	22.2	82.3%	88.1%	25.7%	85.4%	368			

<sup>\*\*\*</sup> Data withheld due to low population counts and/or case counts

Jurisdiction of Residence at HIV Diagnosis: Jurisdiction of residence at time of initial HIV diagnosis.

**Population Age 13+:** Population age 13 years or older, estimate for 7/1/2016.

**Adult/Adolescent Reported HIV Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial HIV diagnosis during the specified year.

Rate: Number of adult/adolescent HIV diagnoses divided by the population age 13 years or older and multiplied by 100.000.

**Linked to Care:** Percent of adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month or 3 months after their initial HIV diagnosis.

**Late HIV Diagnosis:** Percent of adult/adolescent reported HIV diagnoses with an initial AIDS diagnosis less than or equal to 12 months after their initial HIV diagnosis.

**First CD4 Test Result Percent:** Percent of adult/adolescent reported HIV diagnoses with the first CD4 test result reported within 12 months following the initial HIV diagnosis.

**First CD4 Test Result Median Count:** Median CD4 count (cells per microliter) of the first CD4 test result reported within 12 months following initial HIV diagnosis.

Table 2 – Adult/Adolescent AIDS Diagnoses during 2016, Mean Years from HIV Diagnosis and Percent Late HIV Diagnosis, by Jurisdiction of Residence at AIDS Diagnosis, Reported through 6/30/2017

		ADULT/ADOLESCENT REPORTED AIDS DIAGNOSES									
JURISDICTION OF RESIDENCE AT AIDS DIAGNOSIS	Population Age 13+	No.	% of Total	Rate	Mean Years from HIV Diagnosis	% Late HIV Diagnosis					
Anne Arundel	476,307	28	9.5%	5.9	4.0	57.1%					
Baltimore City	518,161	178	60.1%	34.4	6.4	33.1%					
Baltimore	701,795	63	21.3%	9.0	4.8	49.2%					
Carroll	142,910	2	0.7%	1.4	***	***					
Harford	211,682	14	4.7%	6.6	***	***					
Howard	262,960	11	3.7%	4.2	2.3	45.5%					
TOTAL	2,313,816	296	100.0%	12.8	5.5	41.2%					

<sup>\*\*\*</sup> Data withheld due to low population counts and/or case counts

Jurisdiction of Residence at AIDS Diagnosis: Jurisdiction of residence at time of initial AIDS diagnosis.

**Population Age 13+:** Population age 13 years or older, estimate for 7/1/2016.

**Adult/Adolescent Reported AIDS Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial AIDS diagnosis during the specified year.

**Rate:** Number of adult/adolescent AIDS diagnoses divided by the population age 13 years or older and multiplied by 100,000.

**Mean Years from HIV Diagnosis:** Mean number of years from initial HIV diagnosis to initial AIDS diagnosis for cases with a reported AIDS diagnosis.

**Percent Late HIV Diagnosis:** Percent of adult/adolescent reported AIDS diagnoses with an initial HIV diagnosis less than or equal to 12 months prior to their initial AIDS diagnosis.

Table 3 – Adult/Adolescent HIV Cases Alive on 12/31/2016, by Jurisdiction of Residence at Diagnosis, Reported through 6/30/2017

JURISDICTION OF RESIDENCE AT	Population	ADULT/ADOLESCENT LIVING HIV CASES WITHOUT AIDS			ADULT/ADOLESCENT LIVING HIV CASES WITH AIDS			ADULT/ADOLESCENT TOTAL LIVING HIV CASES			
DIAGNOSIS	AGE 13+	No.	% of Total	Rate	No.	% of Total	Rate	No.	% of Total	Rate	Ratio (1 in X)
Anne Arundel	476,307	543	6.8%	114.0	646	6.7%	135.6	1,189	6.7%	249.6	400
Baltimore City	518,161	5,592	69.6%	1,079.2	6,819	71.1%	1,316.0	12,411	70.4%	2,395.2	41
Baltimore	701,795	1,355	16.9%	193.1	1,526	15.9%	217.4	2,881	16.3%	410.5	243
Carroll	142,910	60	0.7%	42.0	74	0.8%	51.8	134	0.8%	93.8	1,066
Harford	211,682	197	2.5%	93.1	246	2.6%	116.2	443	2.5%	209.3	477
Howard	262,960	293	3.6%	111.4	276	2.9%	105.0	569	3.2%	216.4	462
TOTAL	2,313,816	8,040	100.0%	347.5	9,587	100.0%	414.3	17,627	100.0%	761.8	131

**Jurisdiction of Residence at Diagnosis:** Jurisdiction of residence at later time of initial HIV diagnosis or time of initial AIDS diagnosis.

**Population Age 13+:** Population greater than or equal to 13 years old, estimate for 7/1/2016.

**Adult/Adolescent Living HIV Cases without AIDS:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

**Adult/Adolescent Living HIV Cases with AIDS:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Rate: Number of adult/adolescent cases divided by the population age 13 years or older multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Table 4 – Adult/Adolescent HIV Cases Alive on 12/31/2016, by Jurisdiction of Residence at Diagnosis or Current Residence, Reported through 6/30/2017

			ADULT/ADOLESCENT TOTAL LIVING HIV CASES								
JURISDICTION OF	POPULATION	Residence at Diagnosis					%				
RESIDENCE	AGE 13+	No.	% of Total	Rate	Ratio (1 in X)	No.	% of Total	Rate	Ratio (1 in X)	Change	
Anne Arundel	476,307	1,189	6.7%	249.6	400	1,248	7.7%	262.0	381	5.0%	
Baltimore City	518,161	12,411	70.4%	2,395.2	41	10,491	64.7%	2,024.7	49	-15.5%	
Baltimore	701,795	2,881	16.3%	410.5	243	3,305	20.4%	470.9	212	14.7%	
Carroll	142,910	134	0.8%	93.8	1,066	126	0.8%	88.2	1,134	-6.0%	
Harford	211,682	443	2.5%	209.3	477	455	2.8%	214.9	465	2.7%	
Howard	262,960	569	3.2%	216.4	462	592	3.7%	225.1	444	4.0%	
TOTAL	2,313,816	17,627	100.0%	761.8	131	16,217	100.0%	700.9	142	-8.0%	

Jurisdiction of Residence: Jurisdiction of residence at diagnosis or current residence.

**Population Age 13+:** Population age 13 years or older, estimate for 7/1/2016.

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Residence at Diagnosis: Jurisdiction of residence at later time of initial HIV diagnosis or initial AIDS diagnosis.

Current Residence: Jurisdiction of residence from the most recent report since 1/1/2009.

Rate: Number of adult/adolescent cases divided by the population age 13 years or older multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

**Percent Change:** The percent change in number of adult/adolescent total living HIV cases from residence at diagnosis to current residence.

Table 5 – CD4 Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Jurisdiction of Current Residence, Reported through 6/30/2017

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES										
JURISDICTION OF CURRENT		Recent CD4 Test Result									
RESIDENCE	No.	No. with Test	% with Test	Median Count	<200	200-349	350-499	500+			
Anne Arundel	1,248	815	65.3%	585	10.7%	11.9%	15.6%	61.8%			
Baltimore City	10,491	7,008	66.8%	537	13.2%	14.9%	17.2%	54.7%			
Baltimore	3,305	2,201	66.6%	578	10.6%	12.7%	17.1%	59.6%			
Carroll	126	78	61.9%	632	6.4%	20.5%	15.4%	57.7%			
Harford	455	291	64.0%	542	13.1%	15.5%	16.2%	55.3%			
Howard	592	394	66.6%	589	12.9%	11.4%	15.5%	60.2%			
TOTAL	16,217	10,787	66.5%	553	12.4%	14.2%	16.9%	56.5%			

Jurisdiction of Current Residence: Jurisdiction of residence from the most recent report since 1/1/2009.

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year.

With Test: Number and percent of adult/adolescent total living HIV cases with a recent CD4 test result.

**Median Count:** Median CD4 count (cells per microliter), among adult/adolescent total living HIV cases, of the most recent CD4 test result measured in the specified year.

**CD4 Result Distribution (<200, 200-349, 350-499, 500+):** Percent of adult/adolescent living HIV cases with a recent CD4 test result distributed by the CD4 count results (cells per microliter).

Table 6 – Viral Load Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Jurisdiction of Current Residence, Reported through 6/30/2017

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES								
JURISDICTION OF CURRENT RESIDENCE		Recent Viral Load Test Result							
	No.	No. with Test	% with Test	% Suppressed	Median Unsuppressed				
Anne Arundel	1,248	782	62.7%	79.9%	10,471				
Baltimore City	10,491	6,414	61.1%	74.0%	9,550				
Baltimore	3,305	2,011	60.8%	79.8%	10,070				
Carroll	126	74	58.7%	90.5%	1,000				
Harford	455	274	60.2%	86.1%	19,876				
Howard	592	382	64.5%	79.8%	17,500				
TOTAL	16,217	9,937	61.3%	76.3%	10,021				

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

Jurisdiction of Current Residence: Jurisdiction of residence from the most recent report since 1/1/2009.

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year.

With Test: Number and percent of adult/adolescent total living HIV cases with a recent viral load test result.

**Percent Suppressed:** Percent of adult/adolescent total living HIV cases with a recent viral load test result measured in the specified year of less than 200 copies per milliliter.

**Median Unsuppressed:** Median unsuppressed viral load (copies per milliliter) among adult/adolescent total living HIV cases with the most recent viral load test result measured in the specified year of 200 copies per milliliter or greater.

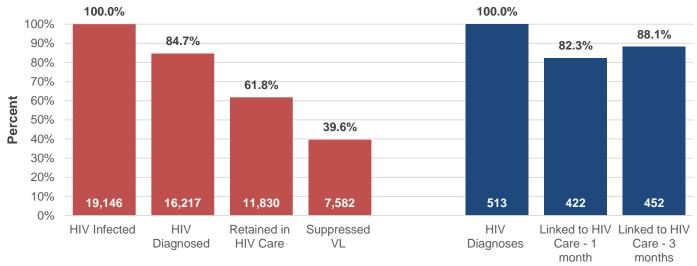
### Section IV – Continuum of Care Cascades

In their 2011 article in Clinical Infectious Diseases, Gardner et al.<sup>1</sup> utilize a continuum of care "cascade" to illustrate estimates of the number of persons living with HIV who belong to each of the stages of engagement in HIV care.

# Figure 7 – Prevalence-Based Estimated Adult/Adolescent 2016 HIV Continuum of Care Cascades, Current Central Region Residents, Reported through 6/30/2017

The prevalence-based Central Region Engagement in HIV Care Cascade (below) uses the most recent Centers for Disease Control and Prevention (CDC) estimate of the number of undiagnosed persons in Maryland (15.3%)<sup>2</sup> to generate an estimated number of HIV infected persons currently residing in the Central Region. It then uses Maryland surveillance data to describe the number and percentage of persons living with HIV in the Central Region on 12/31/2016 and the number and percentage of new HIV diagnoses in 2016 who belong to each of the stages of engagement in HIV care.

Prevalence-Based Estimated Percentage of HIV Infected Adults Engaged in Selected Stages of the Continuum of Care, Current Residents 2016



**Engagement in HIV Care** 

Continuum of Care Stage	Living H	IIV Cases	Continuum of Care Stage	New Diagnoses		
Continuum of Care Stage	Number Percentage		Continuum of Care Stage	Number	Percentage	
HIV Infected	19,146	100.0%	New HIV Diagnoses	513	100.0%	
HIV Diagnosed	16,217	84.7%	Linked to HIV Care – 1 Month	422	82.3%	
Retained in HIV Care	11,830	61.8%	Linked to HIV Care – 3 Months	452	88.1%	
Suppressed VL	7,582	39.6%				

HIV Infected: HIV Diagnosed divided by one minus the estimate of undiagnosed HIV infections (15.3%) in Maryland.

HIV Diagnosed: Adult/adolescent total living HIV cases as of December 31st of the specified year.

Retained in HIV Care: HIV Diagnosed with a reported CD4 or viral load test result performed during the specified year.

**Suppressed Viral Load:** HIV Diagnosed with the most recent viral load measured in the specified year of less than 200 copies per milliliter.

**New HIV Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial HIV diagnosis during the specified year.

**Linked to HIV Care – 1 month:** Adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month after their initial HIV diagnosis.

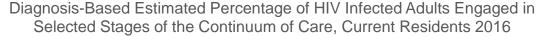
**Linked to HIV Care – 3 months:** Number of adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 3 months after their initial HIV diagnosis.

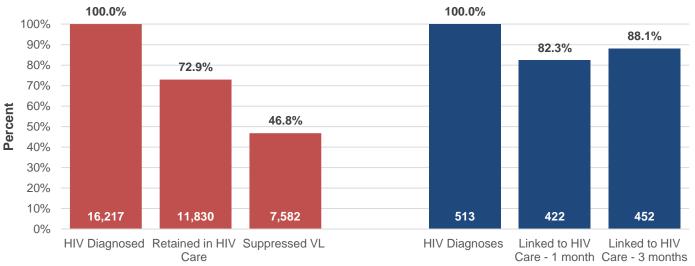
<sup>&</sup>lt;sup>1</sup> Gardner et al, "The Spectrum of Engagement in HIV Care and its Relevance to Test-and-Treat Strategies for Prevention of HIV Infection." Clin Infect Dis. 2011; 52 (6): 793-800

<sup>&</sup>lt;sup>2</sup>Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2015. HIV Surveillance Supplemental Report 2017;22(No. 2). http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published July 2017.

# Figure 8 – Diagnosis-Based Estimated Adult/Adolescent 2016 HIV Continuum of Care Cascades, Current Central Region Residents, Reported through 6/30/2017

The diagnosis-based Central Region Engagement in HIV Care Cascade (below) uses Maryland surveillance data for current Central Region residents to describe the number and percentage of persons living with HIV in the Central Region on 12/31/2016 and the number and percentage of new HIV diagnoses in 2016 who belong to each of the stages of engagement in HIV care.





**Engagement in HIV Care** 

Continuum of Care Stage	Living F	IIV Cases	Continuum of Care Stage	New Diagnoses		
Continuum of Care Stage	Number	Percentage	Continuum of Care Stage	Number	Percentage	
HIV Diagnosed	16,217	100.0%	New HIV Diagnoses	513	100.0%	
Retained in HIV Care	11,830	72.9%	Linked to HIV Care – 1 Month	422	82.3%	
Suppressed VL 7,582		46.8%	Linked to HIV Care – 3 Months	452	88.1%	

**HIV Diagnosed:** Adult/adolescent total living HIV cases as of December 31<sup>st</sup> of the specified year with a recent address in Maryland between 2009 and 2016.

**Retained in HIV Care:** HIV Diagnosed with a reported CD4 or viral load test result performed during the specified year. **Suppressed Viral Load:** HIV Diagnosed with the most recent viral load measured in the specified year of less than 200 copies per milliliter.

**New HIV Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial HIV diagnosis during the specified year.

**Linked to HIV Care – 1 month:** Adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month after their initial HIV diagnosis.

**Linked to HIV Care – 3 months:** Number of adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 3 months after their initial HIV diagnosis.

### Section V – Cases by Age

Table 7 – HIV Diagnoses during 2016, Linked to Care, Late Diagnosis, and First CD4 Test Result by Age at HIV Diagnosis, Reported through 6/30/2017

					REPORTED H	IV DIAGNOS	ES		
AGE AT HIV DIAGNOSIS	POPULATION	No.	% of Total	Rate	Linked t	o Care	Late HIV Diagnoses	First CD4 T	est Result
DIAGNOSIS		NO.	% OF TOTAL	Rate	% 1 mo.	% 3 mo.	%	%	Median Count
<5 (Pediatric)	165,972	0	0.0%	0.0					
5-12 (Pediatric)	270,169	1	0.2%	0.4	***	***	***	***	***
13-19	240,497	26	5.1%	10.8	***	***	***	***	***
20-29	384,547	192	37.4%	49.9	79.2%	87.5%	17.7%	85.4%	426
30-39	375,287	110	21.4%	29.3	88.2%	94.5%	26.4%	87.3%	352
40-49	345,828	76	14.8%	22.0	82.9%	82.9%	31.6%	84.2%	297
50-59	397,694	68	13.2%	17.1	76.5%	82.4%	39.7%	79.4%	238
60+	569,963	41	8.0%	7.2	87.8%	92.7%	39.0%	92.7%	342
TOTAL	2,749,957	514	100.0%	18.7	82.3%	88.1%	25.7%	85.4%	368

<sup>\*\*\*</sup> Data withheld due to low population counts and/or case counts

Age at HIV Diagnosis: Age group at time of initial HIV diagnosis.

**Population:** Population estimate for 7/1/2016.

Reported HIV Diagnoses: Reported HIV diagnoses with an initial HIV diagnosis during the specified year.

Rate: Number of HIV diagnoses divided by the population age 13 years or older and multiplied by 100,000.

**Linked to Care:** Percent of reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month or 3 months after their initial HIV diagnosis.

Late HIV Diagnosis: Percent of reported HIV diagnoses with an initial AIDS diagnosis less than or equal to 12 months after their initial HIV diagnosis.

**First CD4 Test Result Percent:** Percent of reported HIV diagnoses with the first CD4 test result reported within 12 months following the initial HIV diagnosis.

First CD4 Test Result Median Count: Median CD4 count (cells per microliter) of the first CD4 test result reported within 12 months following initial HIV diagnosis.

Table 8 – HIV Cases Alive on 12/31/2016, by Age on 12/31/2016, Reported through 6/30/2017

Age On			To	OTAL LIVING HIV CASI	ES	
12/31/2016	Population	No.	% of Total	% Living with AIDS	Rate	Ratio (1 in X)
<5	165,972	2	0%	50.0%	1.2	82,986
5-12	270,169	25	0.2%	16.0%	9.3	10,806
13-19	240,497	99	0.6%	20.2%	41.2	2,429
20-29	384,547	1,662	10.1%	31.3%	432.2	231
30-39	375,287	2,736	16.6%	43.2%	729.0	137
40-49	345,828	3,581	21.7%	58.9%	1,035.5	96
50-59	397,694	5,465	33.1%	66.0%	1,374.2	72
60+	569,963	2,932	17.8%	67.7%	514.4	194
TOTAL	2,749,957	16,502	100.0%	57.2%	600.1	166

**Age on [date]:** Age group of living cases on the specified date.

**Population:** Population estimate for 7/1/2016.

**Total Living HIV Cases:** Reported HIV diagnoses with or without an AIDS diagnosis and not reported to have died as of December 31<sup>st</sup> of the specified year.

**Percent Living with AIDS:** The percent of reported HIV diagnoses with an AIDS diagnosis not reported to have died as of December 31<sup>st</sup> of the specified year.

Rate: Number of HIV cases divided by the population multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Table 9 – CD4 Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Age on 12/31/2016, Reported through 6/30/2017

		ADULT/ADOLESCENT TOTAL LIVING HIV CASES										
AGE ON			Recent CD4 Test Results									
12/31/2016	No.	No. with Test	% with Test	Median Count	<200	200-349	350-499	500+				
13-19	38	24	63.2%	550	0.0%	16.7%	29.2%	54.2%				
20-29	1,487	927	62.3%	554	11.3%	12.5%	19.1%	57.1%				
30-39	2,715	1,701	62.7%	547	12.9%	14.1%	17.3%	55.7%				
40-49	3,580	2,325	64.9%	540	13.6%	13.9%	17.2%	55.3%				
50-59	5,465	3,776	69.1%	555	12.7%	14.5%	15.8%	57.0%				
60+	2,932	2,034	69.4%	561	10.8%	14.5%	17.3%	57.4%				
TOTAL	16,217	10,787	66.5%	553	12.4%	14.2%	16.9%	56.5%				

Table 10 – Viral Load Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Age on 12/31/2016, Reported through 6/30/2017

		Adult/Add	DLESCENT TOTAL LIVING	HIV CASES	
AGE ON			Recent Viral Lo	ad Test Result	
12/31/2016	No.	No. with Test	% with Test	% Suppressed	Median Unsuppressed
13-19	38	31	81.6%	51.6%	13,183
20-29	1,487	965	64.9%	58.9%	10,833
30-39	2,715	1,660	61.1%	71.0%	13,515
40-49	3,580	2,183	61.0%	75.7%	12,900
50-59	5,465	3,398	62.2%	80.1%	6,734
60+	2,932	1,700	58.0%	85.1%	7,580
TOTAL	16,217	9,937	61.3%	76.3%	10,021

**Age on [date]:** Age group of living cases on the specified date.

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year.

CD4 With Test: Number and percent of adult/adolescent total living HIV cases with a recent CD4 test result.

**Median Count:** Median CD4 count (cells per microliter), among adult/adolescent total living HIV cases, of the most recent CD4 test result measured in the specified year.

**CD4 Result Distribution (<200, 200-349, 350-499, 500+):** Percent of adult/adolescent living HIV cases with a recent CD4 test result distributed by the CD4 count results (cells per microliter).

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year.

Viral Load With Test: Number and percent of adult/adolescent total living HIV cases with a recent viral load test result.

**Percent Suppressed:** Percent of adult/adolescent total living HIV cases with a recent viral load test result measured in the specified year of less than 200 copies per milliliter.

**Median Unsuppressed:** Median unsuppressed viral load (copies per milliliter) among adult/adolescent total living HIV cases with the most recent viral load test result measured in the specified year of 200 copies per milliliter or greater.

### Section VI – Adult/Adolescent Cases by Demographics

Table 11 – Adult/Adolescent HIV Diagnoses during 2016, Linked to Care, Late Diagnosis, and First CD4 Test Result by Sex at Birth, Race/Ethnicity, and Country of Birth, Reported through 6/30/2017

		ADULT/ADOLESCENT REPORTED HIV DIAGNOSES									
SEX AT BIRTH	Population Age 13+*	No.	% of	Rate -	Linked to Care		Late HIV Diagnoses	First CD4 Test Result			
		NO.	Total	Nate	% 1 mo.	% 3 mo.	%	%	Median Count		
Male	1,102,809	386	75.2%	35.0	81.9%	88.1%	24.9%	85.8%	368		
Female	1,211,007	127	24.8%	10.5	83.5%	88.2%	28.3%	84.3%	373		
TOTAL	2,313,816	513	100.0%	22.2	82.3%	88.1%	25.7%	85.4%	368		

				ADULT/AD	OLESCENT RE	PORTED HIV	DIAGNOSES		
RACE/ETHNICITY	POPULATION AGE 13+*	No.	% of	Rate	Linked t	o Care	Late HIV Diagnoses	First CI Res	
	7.02 101	NO.	Total	Nate	% 1 mo.	% 3 mo.	%	%	Median Count
Hispanic	113,467	34	6.6%	30.0	76.5%	82.4%	23.5%	82.4%	356
Non-Hispanic	2,200,349	479	93.4%	21.8	82.7%	88.5%	25.9%	85.6%	368
American Indian/Alaska Native, only	5,837	0	0.0%	0.0					
Asian, only	131,127	7	1.4%	5.3	71.4%	71.4%	***	100.0%	374
Black, only	667,268	359	70.0%	53.8	81.6%	88.3%	22.6%	85.8%	391
Native Hawaiian/ Other Pacific Islander, only	1,201	0	0.0%	0.0					
White, only	1,355,368	95	18.5%	7.0	86.3%	90.5%	38.9%	82.1%	260
Multiracial/ Other	39,547	18	3.5%	45.5	88.9%	88.9%	***	94.4%	312
TOTAL	2,313,816	513	100.0%	22.2	82.3%	88.1%	25.7%	85.4%	368

				ADULT/ADO	DLESCENT REF	PORTED HIV	DIAGNOSES		
Country of Birth	POPULATION AGE 13+*	No	% of	Rate -	Linked to	o Care	Late HIV Diagnoses	First CD4 Test Result	
	AGE 104	No.	Total	Nate	% 1 mo.	% 3 mo.	%	%	Median Count
United States	2,029,710	445	86.7%	21.9	81.6%	88.1%	24.9%	84.9%	371
Foreign-born	252,609	53	10.3%	21.0	83.0%	84.9%	34.0%	88.7%	328
Africa		30	5.8%		83.3%	86.7%	40.0%	90.0%	255
Asia		5	1.0%		***	***	***	100.0%	549
Caribbean		7	1.4%		71.4%	71.4%	0.0%	***	908
Central America		9	1.8%		88.9%	88.9%	***	100.0%	402
Other		2	0.4%		***	***	***	***	***
Unknown		15	2.9%		100.0%	100.0%	***	86.7%	375
TOTAL	2,282,320	513	100.0%	22.5	82.3%	88.1%	25.7%	85.4%	368

<sup>\*</sup> Population data by sex at birth, age, and race/ethnicity are from the 2016 U.S. Census population estimates

**Population Age 13+:** Population greater than or equal to 13 years old, estimate for 7/1/2016.

<sup>\*\*</sup> Population data by country of birth are from the 2015 American Community Survey

<sup>\*\*\*</sup> Data withheld due to low population and/or case counts

**Adult/Adolescent Reported HIV Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial HIV diagnosis during the specified year.

Rate: Number of adult/adolescent HIV diagnoses divided by the population age 13 years or older and multiplied by 100.000.

**Linked to Care:** Percent of adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month or 3 months after their initial HIV diagnosis.

**Late HIV Diagnosis:** Percent of adult/adolescent reported HIV diagnoses with an initial AIDS diagnosis less than or equal to 12 months after their initial HIV diagnosis.

**First CD4 Test Result Percent**: Percent of adult/adolescent reported HIV diagnoses with the first CD4 test result reported within 12 months following the initial HIV diagnosis.

First CD4 Test Result Median Count: Median

Table 12 – Adult/Adolescent Living HIV Cases Alive on 12/31/2016, by Sex at Birth, Race/Ethnicity, and Country of Birth, Reported through 6/30/2017

	POPULATION .	Adult/Adolescent Total Living HIV Cases							
SEX AT BIRTH	AGE 13+	No.	% of Total	% Living with AIDS	Rate	Ratio (1 in X)			
Male	1,102,809	10,593	65.3%	55.9%	960.5	104			
Female	1,211,007	5,624	34.7%	59.5%	464.4	215			
TOTAL	2,313,816	16,217	100.0%	57.1%	700.9	142			

	POPULATION	Adult/Adolescent Total Living HIV Cases						
RACE/ETHNICITY	AGE 13+*	No.	% of Total	% Living with AIDS	Rate	Ratio (1 in X)		
Hispanic	113,467	709	4.4%	54.9%	624.9	160		
Non-Hispanic	2,200,349	15,508	95.6%	57.3%	704.8	141		
American Indian/Alaska Native, only	5,837	7	0.0%	42.9%	119.9	833		
Asian, only	131,127	81	0.5%	37.0%	61.8	1,618		
Black, only	667,268	12,185	75.1%	58.0%	1,826.1	54		
Native Hawaiian/ Other Pacific Islander, only	1,201	1	0.0%	0.0%	83.3	1,201		
White, only	1,355,368	2,219	13.7%	52.4%	163.7	610		
Multiracial/ Other	39,547	1,015	6.3%	61.0%	2,566.5	38		
TOTAL	2,313,816	16,217	100.0%	57.1%	700.9	142		

COUNTRY OF	POPULATION .	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
BIRTH	AGE 13+**	No.	% of Total	% Living with AIDS	Rate	Ratio (1 in X)			
United States	2,029,710	15,047	92.8%	57.9%	741.3	134			
Foreign-born	252,609	695	4.3%	56.0%	275.1	363			
Africa		369	2.3%	54.2%					
Asia		85	0.5%	56.5%					
Caribbean		62	0.4%	58.1%					
Central America		119	0.7%	61.3%					
Other		60	0.4%	53.3%					
Unknown		475	2.9%	34.9%					
TOTAL	2,282,320	16,217	100.0%	57.1%	710.5	140			

<sup>\*</sup> Population data by sex at birth, age, and race/ethnicity are from the 2016 U.S. Census population estimates

**Population Age 13+:** Population greater than or equal to 13 years old, estimate for 7/1/2016.

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

**Percent Living with AIDS:** The percent of reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

Rate: Number of adult/adolescent cases divided by the population age 13 years or older multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

<sup>\*\*</sup> Population data by country of birth are from the 2015 American Community Survey

Table 13 – CD4 Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Sex at Birth, Race/Ethnicity and Country of Birth, Reported through 6/30/2017

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES									
SEX AT BIRTH	No.	Recent CD4 Test Result								
OLAMI BIKIII		No. with Test	% with Test	Median Count	<200	200-349	350-499	500+		
Male	10,593	6,871	64.9%	537	12.4%	14.6%	18.1%	54.9%		
Female	5,624	3,916	69.6%	585	12.5%	13.4%	14.8%	59.2%		
TOTAL	16,217	10,787	66.5%	553	12.4%	14.2%	16.9%	56.5%		

		Adult/Adolescent Total Living HIV Cases							
RACE/ETHNICITY		Recent CD4 Test Result							
	No.	No. with Test	% with Test	Median Count	<200	200-349	350-499	500+	
Hispanic	709	486	68.5%	530	10.3%	16.9%	18.5%	54.3%	
Non-Hispanic	15,508	10,301	66.4%	554	12.5%	14.0%	16.8%	56.6%	
American Indian/Alaska Native, only	7	***	***	***	***	***	***	***	
Asian, only	81	51	63.0%	540	3.9%	9.8%	31.4%	54.9%	
Black, only	12,185	8,103	66.5%	546	12.7%	14.4%	17.0%	55.8%	
Native Hawaiian/Other Pacific Islander, only	1	***	***	***	***	***	***	***	
White, only	2,219	1,437	64.8%	601	10.4%	12.7%	14.9%	61.9%	
Multiracial/Other	1,015	708	69.8%	550	14.8%	12.7%	17.7%	54.8%	
TOTAL	16,217	10,787	66.5%	553	12.4%	14.2%	16.9%	56.5%	

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES									
Country Of Birth		Recent CD4 Test Result								
	No.	No. with Test	% with Test	Median Count	<200	200-349	350-499	500+		
United States	15,047	10,013	66.5%	554	12.7%	14.1%	16.6%	56.6%		
Foreign-born	695	475	68.3%	534	9.1%	13.5%	23.8%	53.7%		
Africa	369	253	68.6%	529	9.1%	13.8%	23.7%	53.4%		
Asia	85	55	64.7%	478	7.3%	10.9%	32.7%	49.1%		
Caribbean	62	45	72.6%	559	8.9%	8.9%	17.8%	64.4%		
Central America	119	82	68.9%	536	8.5%	18.3%	19.5%	53.7%		
Other	60	40	66.7%	523	12.5%	10.0%	27.5%	50.0%		
Unknown	475	299	62.9%	556	8.4%	17.1%	16.1%	58.5%		
TOTAL	16,217	10,787	66.5%	553	12.4%	14.2%	16.9%	56.5%		

<sup>\*\*\*</sup> Data withheld due to low population and/or case counts

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year.

With Test: Number and percent of adult/adolescent total living HIV cases with a recent CD4 test result.

**Median Count:** Median CD4 count (cells per microliter), among adult/adolescent total living HIV cases, of the most recent CD4 test result measured in the specified year.

**CD4 Result Distribution (<200, 200-349, 350-499, 500+):** Percent of adult/adolescent living HIV cases with a recent CD4 test result distributed by the CD4 count results (cells per microliter).

Table 14 – Viral Load Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Sex at Birth, Race/Ethnicity and Country of Birth, Reported through 6/30/2017

	Adult/Adolescent Total Living HIV Cases							
SEX AT BIRTH		Recent Viral Load Test Result						
	No.	No. with Test	% with Test	% Suppressed	Median Unsuppressed			
Male	10,593	6,341	59.9%	77.3%	11,390			
Female	5,624	3,596	63.9%	74.6%	8,520			
TOTAL	16,217	9,937	61.3%	76.3%	10,021			

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
RACE/ETHNICITY		Recent Viral Load Test Result						
	No.	No. with Test	% with Test	% Suppressed	Median Unsuppressed			
Hispanic	709	445	62.8%	78.4%	13,517			
Non-Hispanic	15,508	9,492	61.2%	76.2%	9,810			
American Indian/Alaska Native, only	7	***	***	***	***			
Asian, only	81	48	59.3%	85.4%	38,905			
Black, only	12,185	7,523	61.7%	74.9%	9,511			
Native Hawaiian/Other Pacific Islander, only	1	***	***	***	***			
White, only	2,219	1,274	57.4%	82.2%	13,024			
Multiracial/Other	1,015	645	63.5%	79.1%	11,611			
TOTAL	16,217	9,937	61.3%	76.3%	10,021			

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES							
COUNTRY OF BIRTH		Recent Viral Load Test Result						
	No.	No. with Test	% with Test	% Suppressed	Median Unsuppressed			
United States	15,047	9,226	61.3%	75.8%	10,000			
Foreign-born	695	427	61.4%	85.7%	7,762			
Africa	369	229	62.1%	86.5%	6,280			
Asia	85	48	56.5%	87.5%	27,462			
Caribbean	62	41	66.1%	85.4%	16,074			
Central America	119	74	62.2%	83.8%	13,517			
Other	60	35	58.3%	82.9%	3,977			
Unknown	475	284	59.8%	78.2%	13,758			
TOTAL	16,217	9,937	61.3%	76.3%	10,021			

<sup>\*\*\*</sup> Data withheld due to low population and/or case counts

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year.

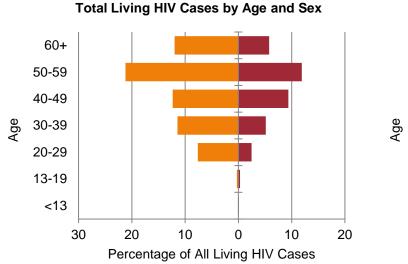
With Test: Number and percent of adult/adolescent total living HIV cases with a recent viral load test result.

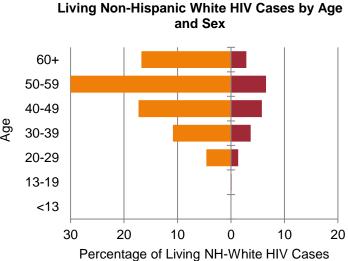
**Percent Suppressed:** Percent of adult/adolescent total living HIV cases with a recent viral load test result measured in the specified year of less than 200 copies per milliliter.

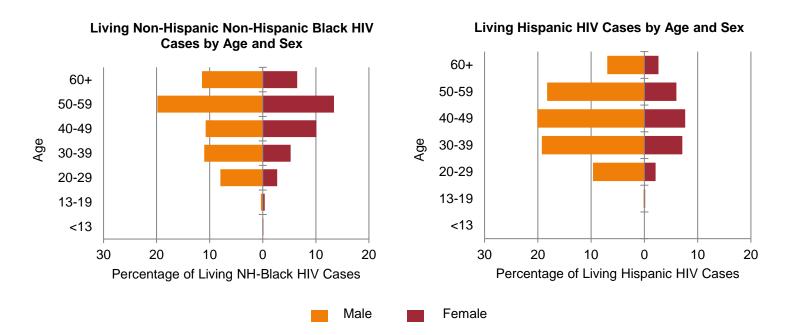
**Median Unsuppressed:** Median unsuppressed viral load (copies per milliliter) among adult/adolescent total living HIV cases with the most recent viral load test result measured in the specified year of 200 copies per milliliter or greater.

### Section VII – HIV Cases by Expanded Demographics

Figure 9 – Population Pyramids of Total Living HIV Cases by Current Age, Sex at Birth, and Race/Ethnicity, Alive on 12/31/2016 and Reported through 6/30/2017







**Total Living HIV Cases:** Reported HIV diagnoses with or without an AIDS diagnosis and not reported to have died as of December 31<sup>st</sup> of the specified year.

Table 15 – Total Living Male HIV Cases by Current Age and Race/Ethnicity, Alive on 12/31/2016 and Reported through 6/30/2017

		Total	LIVING MALE HIV	Cases		
			RACE/E1	THNICITY		
AGE ON 12/31/2016		Hispanic	Non- Hispanic Black, only	Non- Hispanic White, only	Non- Hispanic Other Race	TOTAL MALES BY AGE GROUP
	Population	21,463	71,380	103,385	25,670	221,898
<13 (Pediatric)	Cases	0	9	1	0	10
<13 (Pediatric)	Rate	0.0	12.6	1.0	0.0	4.5
	Ratio (1 in X)		7,931	103,385		22,189
	Population	8,564	39,781	61,821	12,339	122,505
13-19	Cases	1	44	1	3	49
13-19	Rate	11.7	110.6	1.6	24.3	40.0
	Ratio (1 in X)	8,564	904	61,821	4,112	2,500
	Population	12,967	60,255	102,340	16,463	192,025
20-29	Cases	69	993	103	91	1,256
20-29	Rate	532.1	1,648.0	100.6	552.8	654.1
	Ratio (1 in X)	187	60	993	180	152
	Population	15,704	49,127	100,211	17,031	182,073
20.20	Cases	138	1,373	242	134	1,887
30-39	Rate	878.8	2,794.8	241.5	786.8	1,036.4
	Ratio (1 in X)	113	35	414	127	96
	Population	10,765	46,684	93,633	14,797	165,879
40-49	Cases	144	1,339	386	165	2,034
40-49	Rate	1,337.7	2,868.2	412.2	1,115.1	1,226.2
	Ratio (1 in X)	74	34	242	89	81
	Population	6,321	50,557	122,217	11,065	190,160
50.50	Cases	131	2,469	670	229	3,499
50-59	Rate	2,072.5	4,883.6	548.2	2,069.6	1,840.0
	Ratio (1 in X)	48	20	182	48	54
	Population	4,638	54,497	178,385	12,647	250,167
60+	Cases	50	1,425	374	128	1,977
60+	Rate	1,078.1	2,614.8	209.7	1,012.1	790.3
	Ratio (1 in X)	92	38	476	98	126
_	Population	80,422	372,281	761,992	110,012	1,324,707
TOTAL MALES	Cases	533	7,652	1,777	750	10,712
BY RACE/ETHNICITY	Rate	662.8	2,055.4	233.2	681.7	808.6
TAOL/ETTINIOTT	Ratio (1 in X)	150	48	428	146	123

Age on [date]: Age group of living cases on the specified date.

**Total Living Male HIV Cases:** Reported HIV diagnoses with Male sex at birth with or without an AIDS diagnosis and not reported to have died as of December 31st of the specified year.

Population: Population estimate for 7/1/2016.

Rate: Number of HIV cases divided by the population multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Table 16 – Total Living Female HIV Cases by Current Age and Race/Ethnicity, Alive on 12/31/2016 and Reported through 6/30/2017

	TOTAL LIVING FEMALE HIV CASES								
			RACE/E	THNICITY					
AGE ON 12/31/2016		Hispanic	Non- Hispanic Black, only	Non- Hispanic White, only	Non- Hispanic Other Race	TOTAL FEMALES BY AGE GROUP			
	Population	20,629	69,474	98,722	25,417	214,243			
12 (Dodictric)	Cases	0	15	0	2	17			
<13 (Pediatric)	Rate	0.0	21.6	0.0	7.9	7.9			
	Ratio (1 in X)		4,631		12,708	12,602			
	Population	8,200	39,175	58,470	12,148	117,992			
13-19	Cases	1	45	3	1	50			
13-19	Rate	12.2	114.9	5.1	8.2	42.4			
	Ratio (1 in X)	8,200	870	19,490	12,148	2,359			
	Population	11,862	64,389	98,769	17,502	192,522			
20-29	Cases	15	337	30	24	406			
20-29	Rate	126.5	523.4	30.4	137.1	210.9			
	Ratio (1 in X)	790	191	3,292	729	474			
	Population	13,293	61,027	99,518	19,376	193,214			
30-39	Cases	51	653	82	63	849			
30-39	Rate	383.7	1,070.0	82.4	325.1	439.4			
	Ratio (1 in X)	260	93	1,213	307	227			
	Population	9,539	56,674	97,089	16,647	179,949			
40-49	Cases	55	1,257	129	106	1,547			
40-49	Rate	576.6	2,217.9	132.9	636.8	859.7			
	Ratio (1 in X)	173	45	752	157	116			
	Population	5,906	62,179	126,843	12,606	207,534			
50-59	Cases	43	1,669	146	108	1,966			
50-59	Rate	728.1	2,684.2	115.1	856.7	947.3			
	Ratio (1 in X)	137	37	868	116	105			
	Population	5,708	82,924	216,072	15,092	319,796			
00.	Cases	19	808	64	64	955			
60+	Rate	332.9	974.4	29.6	424.1	298.6			
	Ratio (1 in X)	300	102	3,376	235	334			
	Population	75,137	435,842	795,483	118,788	1,425,250			
TOTAL FEMALES	Cases	184	4,784	454	368	5,790			
BY RACE/ETHNICITY	Rate	244.9	1,097.6	57.1	309.8	406.2			
TAGE/ETTINICITY	Ratio (1 in X)	408	91	1,752	322	246			

Age on [date]: Age group of living cases on the specified date.

**Total Living Female HIV Cases:** Reported HIV diagnoses with Female sex at birth with or without an AIDS diagnosis and not reported to have died as of December 31<sup>st</sup> of the specified year.

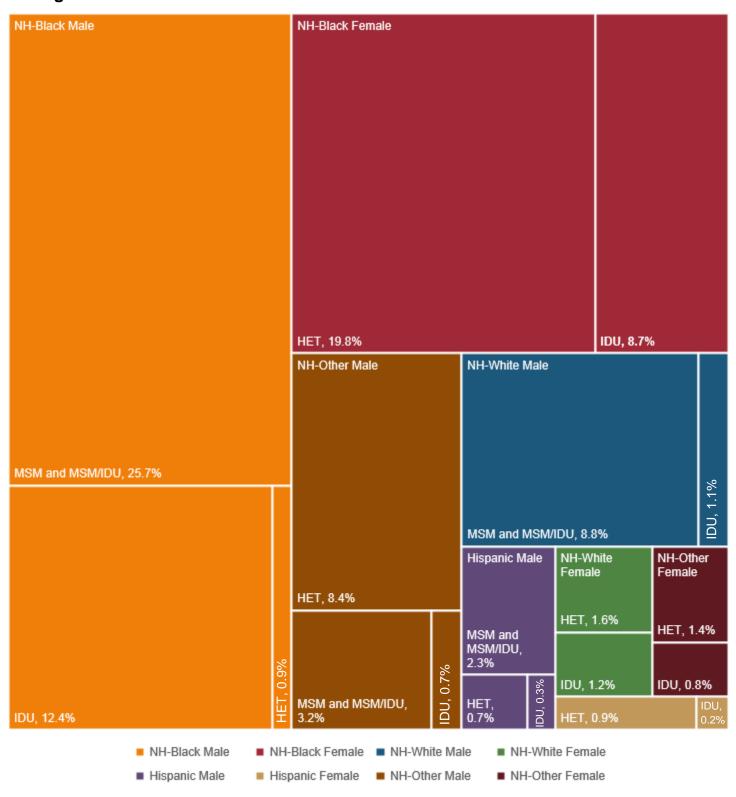
**Population:** Population estimate for 7/1/2016.

Rate: Number of HIV cases divided by the population multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

### Section VIII - HIV Exposure Category

Figure 10 – Proportion of Adult/Adolescent Total Living HIV Cases, by Estimated Exposure Category, Race/Ethnicity, and Sex at Birth, Alive on 12/31/2016, Reported through 6/30/2017



Other exposure category not shown (<1%).

Multiple imputation was used to estimate and adjust for missing transmission category.

Men who have Sex with Men (MSM): Men who report a history of sexual contact with other men (homosexual contact) including men who report sexual contact with both men and women (bisexual contact).

**Injection Drug Use (IDU):** Men or women who report receiving an injection, either self-administered or given by another person, of a drug that was not prescribed by a physician.

MSM/IDU: Men who report a history of sexual contact with other men who also have engaged in injection drug use.

**Heterosexual Exposure (HET)**: Men or women who report a history of sexual contact with a person of the opposite sex who is known to have an HIV infection or at high risk for an HIV infection. High risk groups include bisexual men, IDUs and recipients of blood, blood components, transplants of organ or tissue and artificial insemination.

Table 17 – Adult/Adolescent HIV Diagnoses during 2016, Linked to Care, Late Diagnosis, and First CD4 Test Result, by Exposure Category and Sex at Birth, Reported through 6/30/2017

		Adult/Adolescent Reported HIV Diagnoses								
Exposure Category**	No.	% of Total	Linked to	Linked to Care % % 1 mo. 3 mo.		First CD4 T	est Result			
	NO.	Exposure				%	Median Count			
With Exposure	358	100.0%	84.4%	90.5%	23.7%	88.3%	382			
Men who have Sex with Men (MSM)	208	58.1%	83.2%	90.4%	22.6%	87.0%	384			
Injection Drug Users (IDU)	23	6.4%	87.0%	87.0%	***	87.0%	322			
Men who have Sex with Men and Inject Drugs (MSM/IDU)	5	1.4%	100.0%	100.0%	***	100.0%	379			
Heterosexual Exposure (HET)	122	34.1%	85.2%	91.0%	23.8%	90.2%	371			
Other Exposure	0	0.0%								
No Reported Exposure	155		77.4%	82.6%	30.3%	78.7%	307			
Total	513	<u> </u>	82.3%	88.1%	25.7%	85.4%	368			

	ADULT/ADOLESCENT REPORTED HIV DIAGNOSES									
Male Exposure Category**	No.	% of Total			Late HIV Diagnoses	First CD4 T	First CD4 Test Result			
		with Exposure	% 1 mo.	% 3 mo.	%	%	Median Count			
With Exposure	275	100.0%	84.4%	90.5%	23.3%	88.4%	374			
Men who have Sex with Men (MSM)	208	75.6%	83.2%	90.4%	22.6%	87.0%	384			
Injection Drug Users (IDU)	15	5.5%	86.7%	86.7%	***	93.3%	327			
Men who have Sex with Men and Inject Drugs (MSM/IDU)	5	1.8%	100.0%	100.0%	***	100.0%	379			
Heterosexual Exposure (HET)	47	17.1%	87.2%	91.5%	23.4%	91.5%	328			
Other Exposure	0	0.0%								
No Reported Exposure	111		75.7%	82.0%	28.8%	79.3%	313			
TOTAL	386		81.9%	88.1%	24.9%	85.8%	368			

	Adult/Adolescent Reported HIV Diagnoses									
FEMALE EXPOSURE CATEGORY**	No	% of Total	Linked to	Linked to Care		First CD4 Test Result				
	No.	with Exposure	% 1 mo.	% 3 mo.	%	%	Median Count			
With Exposure	83	100.0%	84.3%	90.4%	25.3%	88.0%	433			
Injection Drug Users (IDU)	8	9.6%	87.5%	87.5%	37.5%	75.0%	314			
Heterosexual Exposure (HET)	75	90.4%	84.0%	90.7%	24.0%	89.3%	439			
Other Exposure	0	0.0%								
No Reported Exposure	44		81.8%	84.1%	34.1%	77.3%	261			
TOTAL	127		83.5%	88.2%	28.3%	84.3%	373			

<sup>\*\* 2016</sup> reported HIV exposure data are preliminary.

**Adult/Adolescent Reported HIV Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial HIV diagnosis during the specified year.

**Linked to Care:** Percent of adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month or 3 months after their initial HIV diagnosis.

**Late HIV Diagnosis:** Percent of adult/adolescent reported HIV diagnoses with an initial AIDS diagnosis less than or equal to 12 months after their initial HIV diagnosis.

<sup>\*\*\*</sup> Data withheld due to low population and/or case counts

**First CD4 Test Result Percent:** Percent of adult/adolescent reported HIV diagnoses with the first CD4 test result reported within 12 months following the initial HIV diagnosis.

**First CD4 Test Result Median Count:** Median CD4 count (cells per microliter) of the first CD4 test result reported within 12 months following initial HIV diagnosis.

Table 18 – Adult/Adolescent Living HIV Cases Alive on 12/31/2016, by Exposure Category and Sex at Birth, Reported through 6/30/2017

	Adult/At	DOLESCENT TOTAL LIVING H	IIV CASES
Exposure Category	No.	% of Total with Exposure	% Living with AIDS
With Exposure	14,296	100.0%	59.8%
Men who have Sex with Men (MSM)	5,101	35.7%	49.3%
Injection Drug Users (IDU)	3,739	26.2%	74.3%
Men who have Sex with Men and Inject Drugs (MSM/IDU)	654	4.6%	69.6%
Heterosexual Exposure (HET)	4,756	33.3%	58.0%
Other Exposures	46	0.3%	73.9%
No Reported Exposure*	1,921		37.7%
TOTAL	16,217		57.1%

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES						
Male Exposure Category	No.	% of Total with Exposure	% Living with AIDS				
With Exposure	9,444	100.0%	58.1%				
Men who have Sex with Men (MSM)	5,101	54.0%	49.3%				
Injection Drug Users (IDU)	2,150	22.8%	74.3%				
Men who have Sex with Men and Inject Drugs (MSM/IDU)	654	6.9%	69.6%				
Heterosexual Exposure (HET)	1,516	16.1%	59.6%				
Other Exposures	23	0.2%	78.3%				
No Reported Exposure	1,149		37.4%				
TOTAL	10,593		55.9%				

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES						
FEMALE EXPOSURE CATEGORY	No.	% of Total with Exposure	% Living with AIDS				
With Exposure	4,852	100.0%	62.9%				
Injection Drug Users (IDU)	1,589	32.7%	74.3%				
Heterosexual Exposure (HET)	3,240	66.8%	57.3%				
Other Exposures	23	0.5%	69.6%				
No Reported Exposure*	772		38.1%				
TOTAL	5,624		59.5%				

<sup>\*</sup> Includes 65 HIV cases with Presumed Female Heterosexual exposure.

**Percent Living with AIDS:** The percent of reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

Table 19 – Adult/Adolescent Total Living HIV Cases by Exposure Category, Race/Ethnicity, and Sex at Birth, Alive on 12/31/2016 and Reported through 6/30/2017

	Adult/Adolescent Total Living HIV Cases								
	Race/Ethnicity								
Exposure Category	Н	ispanic	Non-Hispa	anic, Black, only	Non-Hispanic, White, only				
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure			
With Exposure	648	100.0%	10,665	100.0%	1,972	100.0%			
Men who have Sex with Men (MSM)	306	47.2%	3,193	29.9%	1,187	60.2%			
Injection Drug Users (IDU)	84	13.0%	3,084	28.9%	333	16.9%			
Men who have Sex with Men and Inject Drugs (MSM/IDU)	28	4.3%	475	4.5%	91	4.6%			
Heterosexual Exposure (HET)	230	35.5%	3,885	36.4%	346	17.5%			
Other Exposures	0	0.0%	28	0.3%	15	0.8%			
No Reported Exposure*	61		1,520		247				
TOTAL	709		12,185	-	2,219				

	Adult/Adolescent Total Living HIV Cases								
	Race/Ethnicity								
Male Exposure Category	Н	ispanic	Non-Hisp	anic, Black, only	Non-Hispanic, White, only				
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure			
With Exposure	486	100.0%	6,692	100.0%	1,582	100.0%			
Men who have Sex with Men (MSM)	306	63.0%	3,193	47.7%	1,187	75.0%			
Injection Drug Users (IDU)	51	10.5%	1,826	27.3%	162	10.2%			
Men who have Sex with Men and Inject Drugs (MSM/IDU)	28	5.8%	475	7.1%	91	5.8%			
Heterosexual Exposure (HET)	101	20.8%	1,188	17.8%	131	8.3%			
Other Exposures	0	0.0%	10	0.1%	11	0.7%			
No Reported Exposure	44		859		187	·			
TOTAL	530		7,551		1,769				

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES									
		Race/Ethnicity								
FEMALE EXPOSURE CATEGORY	Hispanic		Non-Hisp	anic, Black, only	Non-Hispa	Non-Hispanic, White, only				
	No.	% of Total with Exposure	No.	% of Total with Exposure	No.	% of Total with Exposure				
With Exposure	162	100.0%	3,973	100.0%	390	100.0%				
Injection Drug Users (IDU)	33	20.4%	1,258	31.7%	171	43.8%				
Heterosexual Exposure (HET)	129	79.6%	2,697	67.9%	215	55.1%				
Other Exposures	0	0.0%	18	0.5%	4	1.0%				
No Reported Exposure*	17		661		60					
TOTAL	179		4,634		450					

<sup>\*</sup> Includes 1 Hispanic case, 63 non-Hispanic black cases, and 1 non-Hispanic white case with Presumed Female Heterosexual exposure

Table 20 – CD4 Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Exposure Category, Reported through 6/30/2017

			ADULT/AD	OLESCENT TO	TAL LIVING H	IIV CASES			
Exposure Category		Recent CD4 Test Results							
<b>2</b> /11 000/12 <b>0</b> /11 200/11	No.	No. with Test	% with Test	Median Count	<200	200-349	350-499	500+	
With Exposure	14,296	9,764	68.3%	554	12.4%	14.3%	16.8%	56.6%	
Men who have Sex with Men (MSM)	5,101	3,285	64.4%	581	9.4%	12.3%	17.6%	60.7%	
Injection Drug Users (IDU)	3,739	2,705	72.3%	502	16.7%	16.1%	16.9%	50.2%	
Men who have Sex with Men and Inject Drugs (MSM/IDU)	654	449	68.7%	522	13.8%	16.7%	16.9%	52.6%	
Heterosexual Exposure (HET)	4,756	3,290	69.2%	573	11.5%	14.3%	15.7%	58.4%	
Other Exposures	46	35	76.1%	433	14.3%	20.0%	28.6%	37.1%	
No Reported Exposure*	1,921	1,023	53.3%	551	13.0%	13.0%	18.2%	55.8%	
TOTAL	16,217	10,787	66.5%	553	12.4%	14.2%	16.9%	56.5%	

<sup>\*</sup> Includes 65 cases with Presumed Female Heterosexual exposure

Table 21 – Viral Load Test Results during 2016 for Adult/Adolescent HIV Cases Alive on 12/31/2016, by Exposure Category, Reported through 6/30/2017

	ADULT/ADOLESCENT TOTAL LIVING HIV CASES					
EXPOSURE CATEGORY	No	Recent Viral Load Test Results				
	No.	No. with Test	% with Test	% Suppressed	Median Count	
With Exposure	14,296	8,928	62.5%	76.5%	9,910	
Men who have Sex with Men (MSM)	5,101	3,106	60.9%	77.8%	11,321	
Injection Drug Users (IDU)	3,739	2,331	62.3%	71.6%	10,000	
Men who have Sex with Men and Inject Drugs (MSM/IDU)	654	405	61.9%	77.5%	15,520	
Heterosexual Exposure (HET)	4,756	3,056	64.3%	78.9%	8,359	
Other Exposures	46	30	65.2%	66.7%	33,122	
No Reported Exposure*	1,921	1,009	52.5%	74.4%	11,511	
TOTAL	16,217	9,937	61.3%	76.3%	10,021	

<sup>\*</sup> Includes 65 cases with Presumed Female Heterosexual exposure

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year.

CD4 With Test: Number and percent of adult/adolescent total living HIV cases with a recent CD4 test result.

**Median Count:** Median CD4 count (cells per microliter), among adult/adolescent total living HIV cases, of the most recent CD4 test result measured in the specified year.

**CD4 Result Distribution (<200, 200-349, 350-499, 500+):** Percent of adult/adolescent living HIV cases with a recent CD4 test result distributed by the CD4 count results (cells per microliter).

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year.

Viral Load With Test: Number and percent of adult/adolescent total living HIV cases with a recent viral load test result.

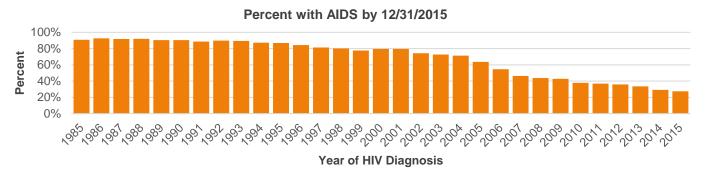
**Percent Suppressed:** Percent of adult/adolescent total living HIV cases with a recent viral load test result measured in the specified year of less than 200 copies per milliliter.

**Median Unsuppressed:** Median unsuppressed viral load (copies per milliliter) among adult/adolescent total living HIV cases with the most recent viral load test result measured in the specified year of 200 copies per milliliter or greater.

### Section IX - Disease Progression and Mortality

# Figure 11 – Trends in Disease Progression by Year of HIV Diagnosis, 1985-2015, Reported through 6/30/2017

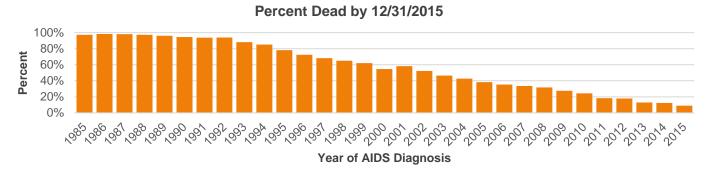
Number of Adult/Adolescent Reported HIV Cases, Age 13+ at HIV Diagnosis, with or without an AIDS Diagnosis by 12/31/2015 (Adult/Adolescent Reported HIV Diagnoses), Number of Adult/Adolescent Reported HIV Cases with an AIDS Diagnosis by 12/31/2016 (Reported AIDS Diagnoses), Percent by Year of HIV Diagnosis of Adult/Adolescent Reported HIV Diagnoses with a Reported AIDS Diagnosis by 12/31/2016, the Average Years from HIV Diagnosis to AIDS Diagnosis for Cases with an AIDS Diagnosis, and the Percent by Year of HIV Diagnosis of Reported Adult/Adolescent HIV Diagnoses with a Reported AIDS Diagnosis at 1 Year, 2 Years, 5 Years, and 10 Years after HIV Diagnosis, by Year of HIV Diagnosis from 1985 through 2015, as Reported by Name through 6/30/2017



_	ADULT/ADOLESCENT REPORTED HIV DIAGNOSES							
YEAR OF HIV	Reported AIDS Diagnoses		gnoses	Percent with AIDS by Years After HIV Diagnosis				
DIAGNOSIS	No.	No.	% with AIDS	Mean Years from HIV to AIDS	1 Year	2 Years	5 Years	10 Years
<1985	225	216	96.0%	7.0	33.8%	33.8%	37.3%	68.0%
1985	438	398	90.9%	6.5	26.0%	27.6%	35.2%	74.9%
1986	585	541	92.5%	5.6	33.0%	34.0%	46.3%	79.1%
1987	760	697	91.7%	4.7	33.2%	36.4%	53.8%	82.4%
1988	1,125	1,035	92.0%	3.9	37.8%	41.6%	63.5%	85.6%
1989	1,429	1,293	90.5%	3.7	37.8%	43.2%	67.1%	83.1%
1990	1,497	1,353	90.4%	3.0	44.0%	50.8%	73.2%	84.8%
1991	1,707	1,513	88.6%	2.7	46.1%	55.5%	73.1%	83.2%
1992	1,669	1,501	89.9%	2.6	50.6%	58.8%	75.2%	83.9%
1993	1,525	1,365	89.5%	2.2	53.8%	61.9%	76.3%	85.3%
1994	1,381	1,204	87.2%	2.3	53.3%	61.2%	74.0%	82.1%
1995	1,344	1,168	86.9%	2.3	56.8%	62.4%	72.2%	82.2%
1996	1,249	1,054	84.4%	1.9	59.4%	64.2%	71.5%	80.4%
1997	1,278	1,040	81.4%	2.1	55.2%	60.0%	68.5%	77.1%
1998	1,270	1,019	80.2%	2.0	55.4%	59.2%	67.8%	76.1%
1999	1,177	913	77.6%	1.7	56.0%	60.2%	68.1%	74.7%
2000	1,105	880	79.6%	1.7	55.9%	60.2%	69.6%	76.9%
2001	1,203	956	79.5%	1.6	58.5%	62.4%	71.2%	76.5%
2002	1,426	1,059	74.3%	1.8	53.9%	57.3%	64.4%	71.1%
2003	1,224	890	72.7%	1.5	54.4%	58.1%	63.9%	70.3%
2004	1,218	869	71.3%	1.6	52.2%	56.2%	62.6%	69.1%
2005	1,268	807	63.6%	1.4	46.8%	49.7%	56.3%	63.0%
2006	1,323	723	54.6%	1.6	38.3%	40.7%	47.8%	54.3%
2007	1,205	558	46.3%	1.8	29.0%	32.1%	39.8%	
2008	1,150	504	43.8%	1.6	28.3%	31.7%	39.2%	
2009	921	394	42.8%	1.5	27.9%	30.7%	38.7%	
2010	938	355	37.8%	1.3	25.8%	28.5%	35.6%	
2011	718	264	36.8%	1.0	27.0%	30.9%	35.5%	
2012	681	244	35.8%	0.8	28.2%	30.5%		
2013	621	208	33.5%	0.5	29.1%	30.6%		
2014	585	171	29.2%	0.4	25.3%	28.2%		
2015	544	149	27.4%	0.2	25.4%			
TOTAL	34,789	25,341	72.8%	2.4	44.7%	49.3%	60.0%	69.1%

## Figure 12 – Trends in Survival Times by Year of AIDS Diagnosis, 1985-2015, Reported through 6/30/2017

Number of Adult/Adolescent Reported HIV Cases, Age 13+ at HIV Diagnosis, with an AIDS Diagnosis by 12/31/15 (Adult/Adolescent Reported AIDS Diagnoses), Number of Adult/Adolescent Reported AIDS Diagnosis Reported to Have Died of Any Cause by 12/31/2016 (Reported AIDS Deaths), Percent by Year of AIDS Diagnosis of Adult/Adolescent Reported AIDS Diagnoses with a Reported AIDS Death (Percent Dead) by 12/31/2016, the Average Years from AIDS Diagnosis to Death for Cases that have Died, and the Percent by Year of AIDS Diagnosis of Adult/Adolescent Reported AIDS Diagnoses Not Reported to Have Died (Percent Alive) at 1 Year, 2 Years, 5 Years, and 10 Years after AIDS Diagnosis, by Year of AIDS Diagnosis from 1985 through 2015, as Reported by Name through 6/30/2017



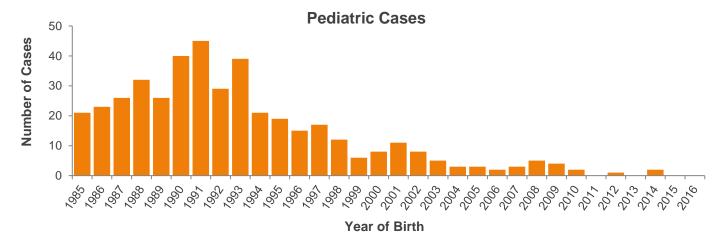
	Adult/Adolescent Reported AIDS Diagnoses							
YEAR OF		Repo	Reported AIDS Deaths Percent Alive by Years After A		After AIDS Di	agnosis		
AIDS				Mean				
DIAGNOSIS	No.	No.	% Dead	Years from AIDS to	1 Year	2 Years	5 Years	10 Years
				Death				
<1985	77	73	94.8%	2.5	51.9%	32.5%	15.6%	13.0%
1985	106	103	97.2%	1.9	42.5%	21.7%	8.5%	6.6%
1986	174	171	98.3%	2.6	54.0%	35.6%	14.9%	8.6%
1987	265	260	98.1%	2.2	61.5%	33.2%	11.3%	5.3%
1988	434	422	97.2%	2.5	59.7%	39.6%	14.3%	6.9%
1989	554	532	96.0%	2.5	61.0%	39.4%	15.7%	8.1%
1990	783	739	94.4%	2.9	65.8%	46.4%	20.2%	11.7%
1991	974	912	93.6%	2.8	67.8%	46.3%	18.2%	12.2%
1992	1,346	1,262	93.8%	3.1	70.2%	48.7%	20.0%	13.8%
1993	1,541	1,356	88.0%	3.7	77.5%	55.2%	32.3%	20.9%
1994	1,381	1,176	85.2%	3.9	77.1%	58.3%	37.9%	23.9%
1995	1,390	1,085	78.1%	4.8	78.3%	66.0%	49.0%	35.0%
1996	1,298	940	72.4%	5.2	81.8%	74.6%	57.2%	41.4%
1997	1,124	766	68.1%	5.3	85.1%	77.1%	60.6%	44.3%
1998	1,031	669	64.9%	5.4	87.0%	80.1%	63.9%	47.0%
1999	1,009	625	61.9%	5.2	87.0%	79.8%	64.0%	48.6%
2000	892	487	54.6%	4.6	85.9%	80.3%	65.1%	52.9%
2001	1,007	586	58.2%	4.5	85.6%	76.9%	62.4%	50.0%
2002	1,066	557	52.3%	4.9	88.1%	82.3%	69.8%	56.7%
2003	950	442	46.5%	3.6	83.7%	78.1%	66.9%	57.8%
2004	961	410	42.7%	3.9	87.3%	82.7%	71.6%	61.3%
2005	889	340	38.2%	3.6	88.4%	83.5%	74.0%	64.3%
2006	815	287	35.2%	3.3	88.3%	83.7%	74.6%	65.3%
2007	607	203	33.4%	3.1	88.3%	84.8%	76.1%	
2008	598	189	31.6%	2.7	88.8%	83.8%	74.9%	
2009	529	145	27.4%	2.7	90.9%	87.0%	77.9%	
2010	550	134	24.4%	2.3	89.8%	87.3%	80.0%	
2011	460	84	18.3%	2.1	93.9%	90.9%	82.8%	
2012	494	89	18.0%	1.5	90.7%	88.7%		
2013	453	59	13.0%	1.3	94.0%	90.1%		
2014	323	40	12.4%	0.7	91.3%	88.5%		
2015*	348	31	8.9%	0.4	92.2%			
TOTAL	24,429	15,174	62.1%	3.8	81.3%	70.6%	54.6%	44.5%

<sup>\*2015</sup> AIDS deaths are preliminary.

#### Section X – Pediatric Cases

#### Figure 13 - Trends in Pediatric HIV Cases, 1985-2016, Reported through 6/30/2017

Number of Pediatric Reported HIV Cases, Age <13 at HIV Diagnosis, with or without an AIDS Diagnosis (Pediatric Reported HIV Diagnoses) by Year of Birth, by Year of HIV Diagnosis, by Year of AIDS Diagnosis, and by Year of Death Due to Any Cause, and Number of Pediatric Reported HIV Cases, Age <13 at HIV Diagnosis, with or without an AIDS Diagnosis and Not Reported to have Died as of December 31st of Each Year (Pediatric Total Living HIV Cases) from 1985 through 2016, as Reported by Name through 6/30/2017



	PEDIATRIC REPORTED HIV DIAGNOSES			PEDIATRIC TOTAL LIVING HIV CASES		
YEAR	No. by Year of Birth	No. by Year of HIV No. by Year of AID		No. by Year of	No. Alive on 12/31 of	
	No. by Teal of Biltin	Diagnosis	Diagnosis	Death	Each Year	
<1985	26	2	1	0		
1985	21	8	5	1	10	
1986	23	7	6	4	13	
1987	26	16	10	5	24	
1988	32	22	14	4	43	
1989	26	28	19	5	66	
1990	40	37	16	5	99	
1991	45	37	26	8	127	
1992	29	45	28	9	163	
1993	39	45	25	12	196	
1994	21	29	20	12	212	
1995	19	20	14	12	220	
1996	15	22	11	14	229	
1997	17	10	7	6	233	
1998	12	16	9	3	246	
1999	6	15	8	5	255	
2000	8	8	2	0	263	
2001	11	9	8	3	268	
2002	8	8	6	4	272	
2003	5	2	1	2	272	
2004	3	5	2	3	274	
2005	3	1	1	0	275	
2006	2	6	3	2	280	
2007	3	33	5	4	309	
2008	5	8	7	3	314	
2009	4	6	3	2	318	
2010	2	1	7	4	315	
2011	0	2	4	4	314	
2012	1	2	3	3	313	
2013	0	1	10	1	314	
2014	2	2	5	0	316	
2015	0	0	2	3	314	
2016	0	1	6	1	311	
TOTAL	454	454	294	144		

## Table 22 – Pediatric HIV Total Living HIV Cases, Diagnosed in Maryland, Alive on 12/31/2016, by Jurisdiction, Reported through 6/30/2017

JURISDICTION OF RESIDENCE AT DIAGNOSIS	PEDIATRIC TOTAL LIVING HIV CASES			
JURISDICTION OF RESIDENCE AT DIAGNOSIS	No.	% of Total		
Anne Arundel	21	6.8%		
Baltimore City	217	69.8%		
Baltimore	49	15.8%		
Carroll	3	1.0%		
Harford	13	4.2%		
Howard	8	2.6%		
TOTAL	311	100.0%		

**Jurisdiction of Residence at Diagnosis:** Jurisdiction of residence at later time of initial HIV diagnosis or initial AIDS diagnosis.

**Pediatric Total Living HIV Cases:** Reported HIV diagnosis, age less than 13 years at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

Table 23 – Pediatric Total Living HIV Cases, Diagnosed in Maryland, by Sex at Birth and Race/Ethnicity, Alive on 12/31/2016 and Reported through 6/30/2017

SEX AT BIRTH	PEDIATRIC TOTAL LIVING HIV CASES			
SEX AT BIRTH	No.	% of Total		
Male	137	44.1%		
Female	174	55.9%		
TOTAL	311	100.0%		

RACE/ETHNICITY	PEDIATRIC TOTAL LIVING HIV CASES			
RACE/ETHNICITY	No.	% of Total		
Hispanic	6	1.9%		
Non-Hispanic	305	98.1%		
American Indian/ Alaska Native, only	0	0.0%		
Asian, only	1	0.3%		
Black, only	271	87.1%		
Native Hawaiian/Other Pacific Islander, only	0	0.0%		
White, only	20	6.4%		
Multiracial/Other	13	4.2%		
Total	311	100.0%		

**Pediatric Total Living HIV Cases:** Reported HIV diagnosis, age less than 13 years at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

### Glossary of Terms

**Adult/Adolescent Living HIV Cases with AIDS:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

**Adult/Adolescent Living HIV Cases without AIDS:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

**Adult/Adolescent Reported AIDS Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial AIDS diagnosis during the specified year.

**Adult/Adolescent Reported HIV Diagnoses:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with an initial HIV diagnosis during the specified year.

**Adult/Adolescent Total Living HIV Cases:** Reported HIV diagnoses, age 13 years or older at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31st of the specified year.

Age at AIDS Diagnosis: Age group at time of initial AIDS diagnosis.

Age at HIV Diagnosis: Age group at time of initial HIV diagnosis.

**Age on [date]:** Age group of living cases on the specified date.

AIDS Deaths: Reported HIV diagnoses with an AIDS diagnosis that have died due to any cause.

CD4 Result Distribution (<200, 200-349, 350-499, 500+): Percent of cases with a CD4 test distributed by their CD4 count results (cells per microliter).

CD4 With Test: Number and percent of adult/adolescent total living HIV cases with a recent CD4 test result.

Corrections: Residence in a state or federal prison. Does not include local jails and detention centers.

Current Residence: Jurisdiction of residence from the most recent report since 1/1/2009.

First CD4 Test Result Median Count: Median CD4 count (cells per microliter) of the first CD4 test result reported within 12 months following initial HIV diagnosis.

**First CD4 Test Result Percent:** Percent of adult/adolescent reported HIV diagnoses with the first CD4 test result reported within 12 months following the initial HIV diagnosis.

Jurisdiction of Current Residence: Jurisdiction of residence from the most recent report since 1/1/2009.

Jurisdiction of Residence: Jurisdiction of residence at diagnosis or current residence.

Jurisdiction of Residence at AIDS Diagnosis: Jurisdiction of residence at time of initial AIDS diagnosis.

**Jurisdiction of Residence at Diagnosis:** Jurisdiction of residence at the later time of initial HIV diagnosis or time of initial AIDS diagnosis.

Jurisdiction of Residence at HIV Diagnosis: Jurisdiction of residence at time of initial HIV diagnosis.

**Late HIV Diagnosis:** Percent of adult/adolescent reported HIV diagnoses with an initial AIDS diagnosis less than or equal to 12 months after their initial HIV diagnosis.

**Linked to Care:** Percent of adult/adolescent reported HIV diagnoses with a reported CD4 or viral load test performed less than or equal to 1 month or 3 months after their initial HIV diagnosis.

**Living HIV Cases with AIDS:** Reported HIV diagnoses with an AIDS diagnosis and not reported to have died as of December 31st of the specified year.

**Living HIV Cases without AIDS:** Reported HIV diagnoses without an AIDS diagnosis and not reported to have died as of December 31st of the specified year.

**Mean Years from HIV Diagnosis:** Mean or average number of years from initial HIV diagnosis to initial AIDS diagnosis for cases with a reported AIDS diagnosis.

**Mean Years from AIDS diagnosis to AIDS Death:** Mean or average number of years from initial AIDS diagnosis to death for adult/adolescent reported AIDS diagnoses with a reported death.

**Median Count:** Median CD4 count (cells per microliter), among adult/adolescent total living HIV cases, of the most recent CD4 test result measured in the specified year.

**Median Unsuppressed:** Median unsuppressed viral load (copies per milliliter) among adult/adolescent living HIV cases with the most recent viral load test result measured in the specified year of 200 copies per milliliter or greater.

**Pediatric Total Living HIV Cases:** Reported HIV diagnosis, age less than 13 years at HIV diagnosis, with or without an AIDS diagnosis, and not reported to have died as of December 31<sup>st</sup> of the specified year.

**Percent Change:** The percent change in number of adult/adolescent total living HIV cases from residence at diagnosis to current residence.

**Percent Alive by Years after AIDS Diagnosis:** Percent of adult/adolescent reported AIDS diagnoses not reported to have died at 1 year, 2 years, 5 years and 10 years after initial AIDS diagnosis, by year of AIDS diagnosis.

**Percent Late HIV Diagnosis:** Percent of adult/adolescent reported AIDS diagnoses with an initial HIV diagnosis less than or equal to 12 months prior to their initial AIDS diagnosis.

**Percent Suppressed:** Percent of adult/adolescent total living HIV cases with a recent viral load test result measured in the specified year of less than 200 copies per milliliter.

**Percent with AIDS:** Percent of adult/adolescent reported HIV diagnoses in the specified year with an initial AIDS diagnosis by 12/31/2016.

**Percent with AIDS by Years after HIV Diagnosis:** Percent of adult/adolescent reported HIV diagnoses in the specified year with an initial AIDS diagnosis at 1 year, 2 years, 5 years and 10 years after HIV diagnosis.

**Population:** Population estimate for 7/1/2016.

**Population Age 13+:** Population age 13 years or older, estimate for 7/1/2016.

Rate: Number of HIV cases divided by the population multiplied by 100,000.

Ratio (1 in X): Number of people for every 1 living HIV case in the population, or 1 living HIV case in every X number of people.

Recent CD4 Test Result: The most recent CD4 test result measured in the specified year.

Recent Viral Load Test Result: The most recent viral load test result measured in the specified year.

**Reported AIDS Deaths:** Reported HIV diagnoses with an AIDS diagnosis, reported to have died of any cause during the specified year.

Reported AIDS Diagnoses: Reported HIV diagnoses with an initial AIDS diagnosis during the specified year.

Reported HIV Diagnoses: Reported HIV diagnoses with an initial HIV diagnosis during the specified year.

**Residence at Diagnosis:** Jurisdiction of residence at later time of initial HIV diagnosis or initial AIDS diagnosis.

Retained in HIV Care: HIV Diagnosed with a CD4 test result performed in the specified year.

**Suppressed Viral Load:** HIV Diagnosed with the most recent viral load measured in the specified year of less than 200 copies per milliliter.

**Total Living HIV Cases:** Reported HIV diagnoses with or without an AIDS diagnosis and not reported to have died as of December 31<sup>st</sup> of the specified year.

Viral Load With Test: Number and percent of adult/adolescent total living HIV cases with a recent viral load test result.